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THE

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Patents Nos. 1,203,561 to 1,204,386.

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Amendment to Trade-Mark Rules.

(Order No. 2,287.)

Department of the Interior,

United States Patent Office,
Washington, D. C., October 18, 1916.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 49 of the rules of the Patent Office relating to the registration of trade-marks is amended to read as follows:

49. Motions to dissolve an interference upon the ground that no interference in fact exists, or that there has been such irregularity in declaring the same as will preclude a proper determination of the question of the right of registration, or which deny the registrability of an applicant's mark, should contain a full statement of the grounds relied upon, and should, if possible, be made not later than the thirtieth day after the notices of the interference have been mailed. Such motions and all motions of a similar character, if in the opinion of the Commissioner they be in proper form, will be heard and determined by the examiner of trade-marks, due notice of the day of hearing being given by the office to all parties. If in the opinion of the Commissioner the motion be not in proper form, or if it be not brought within the time specified and no satisfactory reason be given for the delay, it will not be considered and the parties will be so notified. Setting a motion for hearing by the examiner of trade-marks will act as a stay of proceedings pending the determination of the motion.

When the motion has been decided by the examiner in charge of trade-marks, the files and papers, with his decision, will be sent at once to the docket clerk.

Motions to shift the burden of proof should be made before, and will be determined by, the examiner in charge of interferences. No appeal from the decision on such motion will be entertained, but the matter may be reviewed on appeal from the final decision upon the question of priority.

THOMAS EWING,
Commissioner.

Notice—Internal Revenue—Stamp Act.

Department of the Interior,
United States Patent Office,
Washington, D. C., October 16, 1916.

The revenue act of October 22, 1914, having been superseded by the act of September 8, 1916, the latter act being effective at midnight on that day, revenue-stamps will not be required on powers of attorney and certificates bearing date as of September 9, 1916, or thereafter.

Powers of attorney and certificates dated between December 1, 1914, and September 8, 1916, both dates inclusive, although not filed in the Patent Office until after September 8, 1916, are required to be stamped in accordance with the act of October 22, 1914.

The Patent Office has on hand a small stock of revenue-stamps for the accommodation of those who may be unable to secure them elsewhere. The cost of these stamps cannot be charged to deposit accounts, but cash should be remitted therefor.

THOMAS EWING,
Commissioner of Patents.

Adverse Decisions in Interference.

Patent No. 1,148,780.

On September 26, 1916, a decision was rendered that Alexander V. Jensen was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, 5, 6, 7, 8, and 9 of his Patent No. 1,148,780, subject, "Cement-packing machines," and no appeal having been taken within the time allowed such decision has become final.

Patent No. 1,155,094.

On October 4, 1916, a decision was rendered that Emil Podlesak was not the first inventor of the subject-matter covered by claims 2, 3, 4, 5, 6, 9, 10, and 11 of his patent No. 1,155,094, subject, "Mixture-producing device and speed-governor," and no appeal having been taken within the time allowed such decision has become final.

Amendments.

In order to insure the prompt delivery of amendments to the proper examining division, applicants are requested in their actions on applications to give the division number and the room number appearing on the last Office letter, as well as the date of such letter.

Rule 73. In every amendment the exact word or words to be stricken out or inserted in the application must be specified and the precise point indicated where the erasure or insertion is to be made. All such amendments must be on sheets of paper separate from the papers previously filed, and written on but one side of the paper. Erasures, additions, insertions, or mutilations of the papers and records must not be made by the applicant.

Amendments and papers requiring the signature of the applicant must also, in case of assignment of an undivided part of the invention, be signed by the assignee. (Rules 6, 107.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business November 3, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Aug. 19	Sept. 12	419
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	May 1	Aug. 28	789
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Oct. 25	Oct. 18	60
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Aug. 16	Oct. 21	224
167	5. Bookbinding; Harvesters; Jewelry; Music	June 16	Sept. 21	347
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	July 14	Oct. 21	218
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	June 27	Aug. 8	591
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 2	Aug. 3	1362
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	May 5	July 27	540
235	10. Carriages and Wagons; Spring Devices	May 3	Aug. 29	898
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Sept. 11	Oct. 27	101
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	July 11	Oct. 2	629
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 17	Sept. 7	507
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	July 11	Oct. 2	296
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Sept. 26	Oct. 13	253
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	June 2	July 24	573
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	July 7	Oct. 19	210
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Sept. 27	Oct. 6	183
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	May 3	Aug. 15	452
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Oct. 19	Oct. 18	176
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	July 7	Oct. 2	226
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	May 24	July 20	491
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	May 20	July 14	474
144	24. Apparel; Apparel Apparatus; Sewing-Machines	May 18	July 20	413
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers. Gas Separation.	Sept. 1	Sept. 28	203
106	26. Electricity, Generation; Motive Power	Mar 7	July 17	710
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Sept. 20	Oct. 2	226
65	28. Internal-Combustion Engines	Apr. 22	Aug. 28	541
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	May 15	Aug. 5	390
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Aug. 24	Oct. 19	259
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	May 10	Aug. 24	366
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Apr. 19	Oct. 2	817
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	July 26	Sept. 8	349
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	May 4	June 30	373
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	May 8	Oct. 24	497
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	June 26	Oct. 7	832
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Mar. 31	Aug. 17	806
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Oct. 4	Oct. 6	185
321	39. Water Distribution	May 6	Sept. 8	376
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	June 6	Sept. 22	698
125	41. Railway Draft Appliances; Resilient Tires and Wheels	July 8	Sept. 23	520
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Apr. 3	Aug. 16	549
382	43. Baths and Closets, Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 9	Sept. 27	139

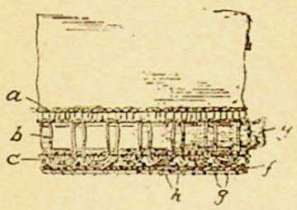
Oldest new case, Mar. 7; oldest amended, June 30.
Total number of applications awaiting action..... 19,268

161	TRADE MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Sept. 27	Oct. 17	554
	Designs	Sept. 20	Sept. 27	312
	Labels and Prints	Oct. 28	Oct. 28	60

PATENTS

GRANTED NOVEMBER 7, 1916.

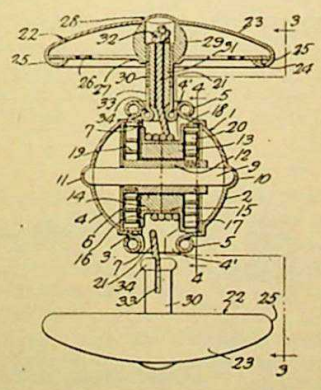
1,203,561. LACE EDGING. MAX N. AARON, Philadelphia, Pa., assignor to Friedberger-Aaron Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 9, 1915. Serial No. 33,013. (Cl. 2—146.)



1. A lace edging for garments comprising a fabric composed of two longitudinal sections of substantially equal width, interconnected loops hinging the sections together, one section being of a comparatively close texture and having a sewing-on edge and the other section containing transverse threads spanning a ribbon space and provided with a sewing on edge.

2. An edging for garments composed of a longitudinal section comprising longitudinally extending rows of stitches forming between them a ribbon space and transverse threads uniting said rows, and a second longitudinal section in hinged relation to the first longitudinal section and comprising a knitted web adapted to be folded over against the first section and form between the two sections a ribbon retaining pocket.

1,203,562. EXTENSIBLE HOLDER. LEE H. ADAMSON, Rogers, Ark. Filed Dec. 13, 1915. Serial No. 66,565. (Cl. 242—107.)

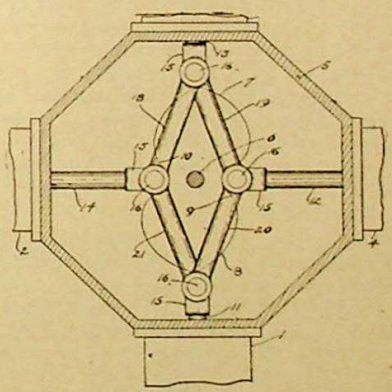


1. In a device of the character described, a shell, a rotary member mounted therein, a reel mounted for rotation upon the rotary member, a flexible element connected to the reel to be normally wound thereon, a spiral spring connecting the reel and rotary member, and a second spring connected to the rotary member and shell whereby the springs act in unison to rotate the reel to wind the flexible elements thereon.

2. In a device of the character described, a shell, a spindle therein, a sleeve mounted for rotation upon the spindle, a reel mounted for rotation upon the sleeve, a pair of flexible elements connected to the reel to be normally wound thereon, a spiral spring connecting the sleeve and reel, and a second spiral spring within the shell connected to the sleeve and shell, both springs being adapted to be wound up when the flexible elements are unwound from the reel.

3. In a device of the character described, a shell comprising a pair of sections, one having an opening and a pair of opposite apertures adjacent said opening, a member detachably engaged within said opening, the other section of the shell being engaged to said member, a spindle within the shell between said apertures and extending through said member, the sections of the shell having means receiving the ends of the spindle, a sleeve rotatable upon the spindle, a reel rotatable upon the sleeve, a pair of flexible elements extending through said apertures and attached to the reel to be normally wound thereon, a spiral spring connecting said member and sleeve, and a spiral spring connecting the sleeve and reel, the springs being adapted to be wound up in unison when the flexible elements are unwound from the reel.

1,203,563. DEVICE FOR CONVERTING MOTION. GUSTAF ANDERSON, Lynn, Mass. Filed Jan. 3, 1916. Serial No. 69,735. (Cl. 74—14.)



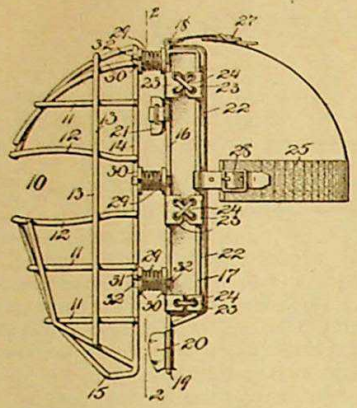
1. A device for converting motion consisting in a rotary shaft having a cam fixed thereon with a pair of oppositely disposed raised lobes alternating with oppositely disposed inset portions, a plurality of reciprocaating members extending substantially at right angles to each other and each having an element engageable with said cam, and a pivoted link bar connection between the inner ends of said reciprocating members for the purpose stated.

2. A device for converting motion, comprising a shaft having a cam fixed thereon formed with oppositely disposed raised lobes alternating with oppositely disposed inset portions, two pairs of reciprocating members mounted to coöperate with said cam, the members of each pair being oppositely disposed and the two pairs being at right angles to each other, and a parallel link bar connection between the inner ends of said members, the inner ends of said members having each a roller continuously engageable with said cam for the purpose stated.

3. A device for converting motion, comprising a shaft having fixed thereon a cam formed with oppositely disposed lobes and with inset portions between said lobes, two pairs of piston rods mounted to coöperate with said cam, the rods of each pair being opposite each other and the two pairs at right angles to each other, parallel link bar connections pivotally connecting the inner ends of

said reciprocating members, each of said reciprocating members having a head equipped with a depending roll continuously engageable with the periphery of said cam.

1,203,564. BASE-BALL MASK. SAUL C. APRIL, Newark, N. J. Filed Mar. 10, 1916. Serial No. 83,219. (Cl. 2—193.)



1. A mask comprising a head portion, means for holding the head portion firmly on the head, a guard portion, and shock-absorbing elements arranged between the head portion and the guard portion, such elements being arranged to normally hold the portions apart.

2. A mask comprising a head portion, means on the head portion for securing it to the head of a person, a wire guard portion conforming in general outline to the outline of the head portion and being adapted to be normally spaced therefrom, and shock-absorbing elements placed between said portions and being secured to said portions to yieldingly hold them spaced apart.

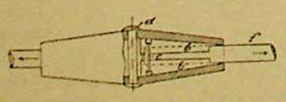
3. A mask comprising a head portion consisting of an open frame, means on the head portion for securing it firmly to the head of a person, a guard portion, and springs secured to said guard portion and to said head portion, said springs being adapted to be compressed when the portions are moved toward each other and being adapted to normally hold them at a normal distance apart.

4. A mask comprising a head portion, said head portion consisting of a metal frame, pads on the metal frame adapted to fit against the head of a person, means for securing the head portion in position, a guard portion, and springs subject to compression, said springs being placed between the guard portion and the head portion.

5. A mask comprising a substantially rigid head portion having means for attaching it to the head of a person, a substantially rigid guard portion, and comparatively resilient elements arranged between the guard portion and the head portion to materially absorb the force of a blow delivered on the guard portion.

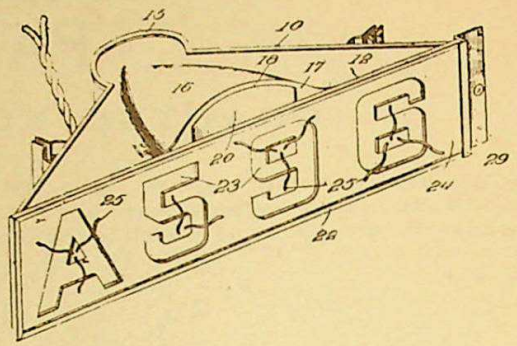
[Claim 6 not printed in the Gazette.]

1,203,565. WIRE-CONNECTOR. ORESTE BAJMA-RIVA, Milan, Italy. Filed Nov. 4, 1915. Serial No. 59,658. (Cl. 173—303.)



A connector for wires and the like, comprising in combination, a double cone sleeve, multi-partite truncated cones adapted to be introduced into said sleeve from opposite ends and adapted to receive the ends of a wire, slitted rings adapted to clamp the parts of said cones on said wires and frictionally engaging the inner walls of said sleeve, and means for limiting the backward movement of said truncated cones, substantially as described.

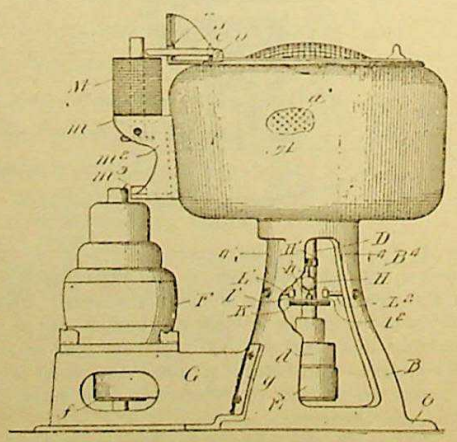
1,203,566. TAIL-LAMP. GALILEO C. BARR, Oklahoma, Okla. Filed Feb. 25, 1915. Serial No. 10,568. (Cl. 40—133.)



1. A device of the character described including a housing having a light chamber and provided with an opening, said housing being formed with walls converging away from said opening into a substantially semicircular wall forming a reflector disposed opposite the said opening, the bottom wall of the housing having an opening formed therein, a flange surrounding the opening in the bottom wall, a socket provided with a flange engaging said first mentioned flange, the socket being adapted to support a lamp projected into the light chamber in front of said reflector, a plate associated with the opening in the housing and adapted to permit the passage of light therethrough, and means for holding said plate in position.

2. A device of the character described including a housing provided with an opening, a receiving member carried by the housing and provided with an opening, a plate associated with the opening in the housing and mounted in said receiving member, the said plate being adapted to permit the passage of light therethrough, a lug carried by the housing adjacent the opening in said receiving member and projecting laterally from the said member, the said lug being adapted to provide a guide for directing the said plate into the receiving member, and a retaining member carried by said lug engaging the plate for maintaining the plate in position.

1,203,567. ELECTRICALLY-OPERATED CENTRIFUGAL EXTRACTOR. WILLIAM BARTHOLOMEW and CHARLES H. ALLEN, Chicago, Ill., assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed Feb. 20, 1913. Serial No. 749,604. (Cl. 74—46.)



1. In a centrifugal extractor, the combination with a rotating member, of a safety guard for protecting said member, an electrical motor for rotating said member, and

electrically actuated means for automatically locking said guard in closed position during the rotation of said member, said means being operative independently of the electromotive force generated by the motor acting as a generator.

2. In a centrifugal extractor, the combination with a rotating member, of a safety guard for protecting said member, electrically actuated means for locking said guard in closed position, and a circuit for said electrically actuated means independent of the armature circuit and comprising a controller automatically operated by said rotating element.

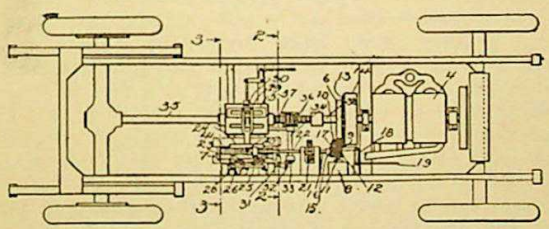
3. In a centrifugal extractor, the combination with a rotating member, of a safety guard for protecting said member, electrically actuated means for locking said guard in closed position, and centrifugal means operated by the rotation of said member for automatically controlling the circuit of said electrically actuated means.

4. In a centrifugal extractor, the combination with a rotating member, of a safety guard for protecting said member, a bolt connected with said guard and reciprocated by the opening and closing thereof, an electromagnet, a sliding plunger actuated by said electromagnet and having a path of movement intersecting that of said bolt, and means actuated by said rotating member for controlling the circuit of said electromagnet, whereby during the operation of said member said plunger will obstruct the movement of said bolt necessary to permit the opening of said guard.

5. In a centrifugal extractor, the combination with a rotating basket, of a cover for said basket, means for rotating said basket, electrically actuated means for locking said cover in closed position, and centrifugal means operated by the rotation of said basket for automatically controlling the circuit of said electrically actuated means.

[Claims 6 to 15 not printed in the Gazette.]

1,203,568. COMBINED ENGINE-STARTING AND GEAR-SHIFTING APPARATUS. ALEXANDER G. BATSNER, Cincinnati, Ohio. Filed Sept. 14, 1914. Serial No. 861,502. (Cl. 74—59.)

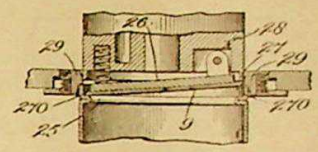


1. In combination in an engine starting and gear shifting apparatus, an engine, a change speed gear mechanism, a clutch, a motor, means adapted to operate said clutch and said gear mechanism, and a second means adapted to operatively connect the motor with said engine or said first mentioned means.

2. A combined gear shifting and engine starting apparatus, comprising an engine, a change speed gear mechanism, a motor, driving means connected with said engine, a second driving means connected with said gear mechanism, and a clutch adapted to operatively connect said first or said second mentioned means to said motor.

3. In combination in a combined clutch operating, gear shifting and engine starting device, an engine, change speed gears, a clutch adapted to operatively connect said engine with said change speed gears, a combined clutch operating and gear shifting mechanism connected with said clutch and said change speed gears, a motor, driving means connected with said engine, a second driving means connected with said mechanism, and a second clutch adapted to operatively connect said first or said second mentioned means to said motor.

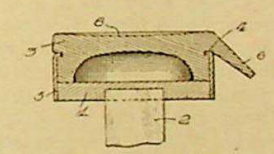
1,203,569. PAPER VESSEL. GEORGE W. BEADLE, New York, N. Y., assignor to The Single Service Package Corporation, New York, N. Y., a Corporation of New Jersey. Filed Sept. 27, 1915. Serial No. 52,927. (Cl. 229—12.)



1. A vessel having a paper body portion provided with an exterior bead, an interior bead, a disk larger than the interior of said vessel fitting the interior of said first named bead, said disk contacting with and overlying said interior bead, and the extreme edge portion of said vessel being turned in, disposed parallel to said body portion, and crimped down against the outer face of said disk to lock it securely against said interior bead, substantially as described.

2. A paper body portion of a tubular form provided with a closure comprising a disk larger than the interior of said body portion; the extreme edge of said body portion being turned over and crimped down parallel to said body portion against one face of said disk; the material of said body portion being forced inward on the other side of said disk to form an annular locking shoulder; and the material of said body portion being forced outwardly to form an exterior bead in which said disk rests, substantially as described.

1,203,570. KEY-TOP FOR TYPE-WRITERS. ROBERT E. BEAUBIEN, Chicago, Ill. Filed May 28, 1915. Serial No. 30,897. (Cl. 197—103.)



1. A key top comprising a main finger-engaged elastic element, a character-bearing elastic element disposed at an incline with respect to the finger-engaged surface of said main element, and a substantially rigid ring mounted on a key head and partially housing one of said elements and securing both thereof to said key head.

2. A key top comprising a main finger-engaged elastic element, a character-bearing elastic element disposed at an incline with respect to the finger-engaged surface of said main element, and a rigid ring partially housing one of said elements and securing both thereof to a key head ring and affording a cushion normally bridged over the forward edge of said ring.

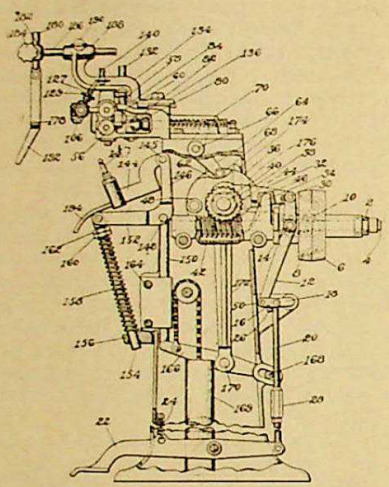
3. A key top comprising a main finger-engaged elastic element, a character-bearing elastic element disposed at an incline with respect to the finger-engaged surface of said main element, and a ring non-rotatably mounted on a key head and partially housing at least one of said elements and securing both thereof to said key head, said elements being rotatable within the ring.

4. A key top comprising a finger-engaged cushion element having a peripheral groove, a substantially rigid clamping ring having a contracted upper end portion entering said groove, said ring securing the cushion element to a key head, and a soft, resilient and character-bearing element integral with the cushion element and overhanging said ring for guarding the operator's finger against direct contact with the forward edge of said ring.

5. A key top comprising a finger-engaged element, a ring partially housing said element and securing the same to a key head, a tab associated with said element and bridging over the forward end of said ring so as to

present an inclined character-bearing surface normally in front of said element and substantially at right angles to the operator's line of vision, said ring being non-rotatable upon the key head, said element being rotatable within the ring to bring the said surface into a position behind said element where the latter will substantially conceal the said surface.

1,203,571. LAST-PULLING MACHINE. JOHN M. BENJAMIN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 10, 1915. Serial No. 13,385. (Cl. 12—1.)



1. A last pulling machine having, in combination, means for holding a shoe, means for holding a last, mechanism constructed and arranged to effect relative movement of said shoe holding means and said last holding means substantially perpendicularly to the plane of the shoe bottom and lengthwise of the shoe and last to separate said shoe and last, and auxiliary means associated with said mechanism and coöperating with said mechanism in the production of said relative movement.

2. A last pulling machine having, in combination, means for holding a shoe, means for holding a last, mechanism for relatively moving said shoe holding means and said last holding means to effect relative movement of the shoe and last to separate said shoe and last, and auxiliary means associated with said mechanism and constructed and arranged to regulate said relative movement automatically according to the resistance to separation offered by the shoe and last at different stages in a last pulling operation.

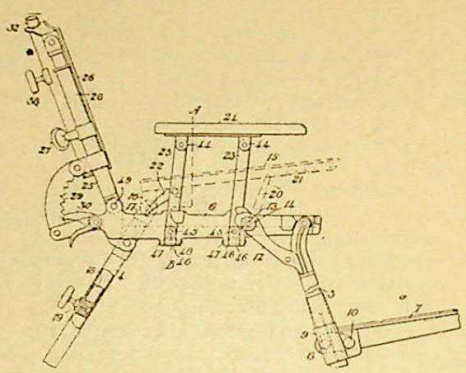
3. A last pulling machine having, in combination, a shoe holder, a last holder, mechanism for relatively moving said holders to effect relative movement of a shoe and last to separate said shoe and last, and auxiliary means operating upon said mechanism to accelerate said relative movement as permitted by said shoe and last.

4. A last pulling machine having, in combination, a shoe holder, a last holder, mechanism for relatively moving said holders to effect movement of a shoe and last to separate said shoe and last, and auxiliary means operating upon said mechanism to retard said relative movement to prevent injuriously straining the shoe.

5. A last pulling machine having, in combination, shoe holding means, last holding means, mechanism for effecting relative movement of said shoe holding means and said last holding means in directions substantially perpendicular to the plane of the shoe bottom and lengthwise of the shoe and last to separate a shoe and last, and auxiliary means coacting with said mechanism and exerting force tending to accelerate such relative lengthwise movement of said shoe and last to facilitate their separation.

[Claims 6 to 26 not printed in the Gazette.]

1,203,572. DENTAL CHAIR. CHARLES FREDERICK BETTS, North Finchley, London, England, assignor to Dental Manufacturing Co., Ltd., London, England. Filed Mar. 16, 1915. Serial No. 14,807. (Cl. 155—7.)



1. A folding dental chair comprising a base, a seat frame, a movable chair seat within said frame, means for raising said chair seat and tilting it to a desired position above said frame, a back pair of legs pivoted to said base, a front pair of legs pivoted to said base and adapted to carry with said back pair of legs said seat frame and so proportioned in relation to the back pair of legs that said seat can be moved within its frame and then folded over with the frame and reversed so as to lie flat with said pairs of legs against said chair base.

2. A dental chair comprising a base, a seat frame, a back pair of legs pivoted to said base, a front pair of legs pivoted to said base and adapted to carry with said back pair of legs said seat frame and so proportioned in relation to the back pair of legs that said seat frame can be folded over and reversed so as to lie flat with said pairs of legs against said chair base, a movable chair seat adapted to lie within said frame when reversed and to be raised and tilted to a desired position above said frame when in the extended position, a pair of lugs pivoted to the underside of the chair seat, telescoping members attached to said lugs and adapted to telescope in the upper ends of said back pair of legs, a series of ratchet teeth on the underside of said chair seat, and pawls pivoted to said seat frame and adapted to engage with one or other of said ratchet teeth.

3. A folding dental chair comprising a base, a seat frame, a movable chair seat within said frame, means for raising said chair seat and tilting it to a desired position above said frame, a back pair of legs pivoted to said base, a front pair of legs pivoted to said base and adapted to carry with said back pair of legs said seat frame and so proportioned in relation to the back pair of legs that said seat can be moved within its frame and then folded over with the frame and reversed so as to lie flat with said pairs of legs against said chair base, a pair of latches respectively pivotally mounted upon said front pair of legs, members projecting from the sides of the seat frame and adapted to be engaged by said latches and to hold said chair in the extended position.

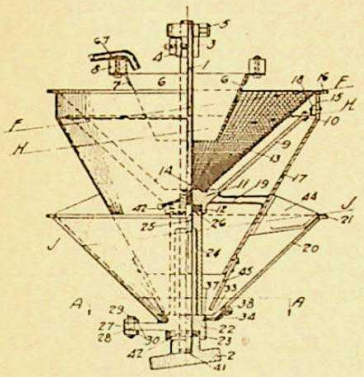
4. A folding dental chair comprising a base, a seat frame, a movable chair seat within said frame, means for raising said chair seat and tilting it to a desired position above said frame, a back pair of legs pivoted to said base, a front pair of legs pivoted to said base and adapted to carry with said back pair of legs said seat frame and so proportioned in relation to the back pair of legs that said seat can be moved within its frame and then folded over with the frame and reversed so as to lie flat with said pairs of legs against said chair base, a pair of hooked members respectively pivotally mounted on said front pair of legs, pins projecting from the sides of the seat frame adapted to be engaged by said hooked members, thumb nuts adapted to be screwed against said hooked members when in engagement with said pins to lock said chair seat when in the extended position.

5. A folding dental chair comprising a base, a seat frame, a movable chair seat within said frame, means for raising said chair seat and tilting it to a desired position above

said frame, a back pair of legs pivoted to said base, a front pair of legs pivoted to said base and adapted to carry with said back pair of legs said seat frame and so proportioned in relation to the back pair of legs that said seat can be moved within its frame and then folded over with the frame and reversed so as to lie flat with said pairs of legs against said chair base, a folding arm rest pivotally attached to the chair frame, a pawl pivoted to said arm rest and adapted to hold said arm rest in position when set for use.

[Claim 6 not printed in the Gazette.]

1,203,573. MINING-MACHINE. SOPHUS P. C. BORSON, Salida, Colo. Filed Nov. 27, 1914. Serial No. 874,295. (Cl. 83—82.)



1. In combination, a guide casing mounted for rotation upon an inclined axis, a concentrating receptacle mounted upon an inclined axis below and concentric with said guide casing and adapted to receive material for concentration therefrom, said concentrating receptacle partly inclosing said guide casing, means attached to said guide casing adapted to elevate and discharge tailings and gangues from said concentrating receptacle, means for rotating said guide casing about its axis, and means for oscillating said concentrating receptacle about its axis, substantially as shown and described.

2. In combination, a guide casing mounted for rotation upon an inclined axis, a concentrating receptacle mounted upon an inclined axis below and concentric with said guide casing and adapted to receive material for concentration therefrom, said concentrating receptacle partly inclosing said guide casing, means attached to said guide casing adapted to elevate and discharge tailings and gangues from said concentrating receptacle, controllable means for discharging concentrates at the bottom of said concentrating receptacle, means for rotating said guide casing about its axis, and means for oscillating said concentrating receptacle about its axis, substantially as shown and described.

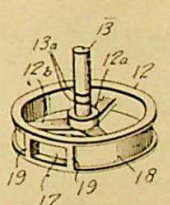
3. In combination, a guide casing mounted for rotation upon an inclined axis, a concentrating receptacle mounted upon an inclined axis below and concentric with said guide casing and adapted to receive material for concentration therefrom, said concentrating receptacle partly inclosing said guide casing, means attached to said guide casing adapted to elevate and discharge tailings and gangues from said concentrating receptacle, controllable means for discharging concentrates at the bottom of said concentrating receptacle, agitating means to prevent the formation of sediment in said concentrating receptacle, means for rotating said guide casing about its axis, and means for oscillating said concentrating receptacle about its axis, substantially as shown and described.

4. In combination, a concentrating receptacle open at the top and converging from top to bottom mounted upon an inclined axis, said receptacle having its bottom pierced to form a plurality of concentrates discharge outlets, controllable means for covering and uncovering said discharge outlets, a guide casing mounted for rotation upon an inclined axis within and partly above said concentrating receptacle, said guide casing being adapted to discharge material for concentration centrally above the bottom of said concentrating receptacle in a manner to prevent contact between entering unconcentrated material and departing treated material, means attached to said guide casing adapted to elevate and discharge tailings and gangues from said concentrating receptacle, means for rotating said guide casing about its axis, and means for vibrating said concentrating receptacle about its axis, substantially as shown and described.

5. In combination, a concentrating receptacle open at the top and converging from top to bottom mounted upon an inclined axis, said receptacle having its bottom pierced to form a plurality of concentrates discharge outlets, controllable means for covering and uncovering said discharge outlets, a guide casing mounted for rotation upon an inclined axis within and partly above said concentrating receptacle, said guide casing being adapted to discharge material for concentration centrally above the bottom of said concentrating receptacle in a manner to prevent contact between entering unconcentrated material and departing treated material, flanged vanes attached to and rotatable with said guide casing and adapted to elevate and discharge tailings and gangues from said concentrating receptacle, means for rotating said guide casing about its axis, agitating means to prevent the formation of sediment in said concentrating receptacle, and means for oscillating said concentrating receptacle about its axis, substantially as shown and described.

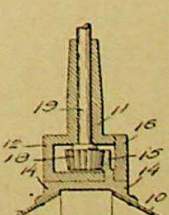
[Claims 6 to 13 not printed in the Gazette.]

1,203,574. ENGINE. WALTER BOX, Georgetown, Tex. Filed Sept. 4, 1915. Serial No. 49,063. (Cl. 123—80.)



In an engine, a cylinder, a head therefor having a cylindrical bore, said head being provided with an inlet port and an exhaust port, a hollow cylindrical body portion rotatably disposed within said bore, said body portion having an opening through one side arranged to register successively with said inlet and said exhaust ports, means for rotating said cylindrical body portion, said cylindrical body portion being provided on its periphery with a circumferential groove in alinement with said opening, the ends of the groove terminating short of the opening on each side thereof, and a spring expansion ring disposed within the groove for free expansion and contraction therein and arranged to cover and uncover said ports.

1,203,575. MOUNTING FOR DRUMS OF CONCRETE-MIXERS. EDWARD W. BRACKENBURY, Milwaukee, Wis., assignor to T. L. Smith Company, Milwaukee, Wis. Filed Mar. 31, 1913. Serial No. 757,931. (Cl. 83—73.)

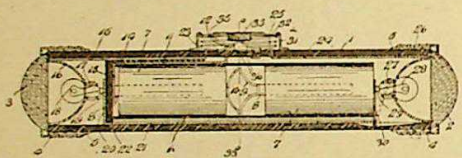


1. In a mixing machine, an element adapted to be rotated, a supporting guiding and rotating means for the rotating element consisting of a single ring attached to or forming part of the rotary element, said ring being located substantially around the center of gravity of said rotary element with both ends of said rotary element accessibly protruding from said ring, cylindrical and flange

bearing surfaces and gear teeth on said ring, a supporting ring mounted on the machine frame, cylindrical and flange bearing surfaces on said supporting ring fitting and entirely covering the corresponding surfaces on the rotary element ring, said cylindrical bearing surfaces adapted to support the weight of said rotary element and said flange bearing surfaces adapted to locate the rotary element in the supporting ring endwise of the axis of rotation of the rotary element, said supporting ring entirely inclosing the gear teeth and a driving gear contained within said supporting ring adapted to rotate said rotary element.

2. In a mixing machine, a rotatable element, a supporting, guiding and rotating means for said rotatable element consisting of a single ring attached to or forming part of the rotatable element, said ring being located substantially around the center of gravity of said rotatable element with both ends of said element accessibly protruding from said ring, cylindrical and flange bearing surfaces and gear teeth on said ring, a supporting ring having trunnions projecting therefrom, said trunnions being mounted to turn on the machine frame, cylindrical and flange bearing surfaces on said supporting ring fitting and entirely covering the corresponding surfaces on the rotatable element ring, said supporting ring entirely inclosing said gear teeth, a driving shaft extending through one of said trunnions, and a driving gear on said shaft contained within said supporting ring adapted to rotate said rotatable element.

1,203,576. TRAINMAN'S FLASH-LIGHT. JAMES E. BROADHEAD, Bay City, Mich. Filed Jan. 18, 1915. Serial No. 2,939. (Cl. 240—8.5.)



1. A flash-light comprising a cylindrical casing open at both ends, a lens and light detachably positioned at each end of the casing, a second casing located within the first casing and containing electric batteries, a switch located on the outside of the outer casing including a member movable longitudinally of the casing, connections between the lights, batteries and switch for lighting either light by operation of the switch in opposite directions, and means for retaining the batteries in position within the inner casing operated by the connection of one of the lamps to the casing, substantially as described.

2. In a flash-light, a cylindrical outer casing having open ends, an inner cylindrical casing lying lengthwise inside the outer casing, a strip having an upturned end secured to the inner side of the outer casing, a second upturned end hinged to the opposite end of the strip and means for detachably engaging a light against each of said upturned ends and for detachably securing a lens at each end of the outer casing, substantially as described.

3. Means for holding batteries and connecting them in series in an electric flash-light comprising a strip having an upturned integral end and a similar end hinged to the opposite end of the strip, a cylindrical casing lying between the said upturned ends, batteries positioned end to end within said casing and yielding contact connections between the opposed poles of the batteries.

4. In an electric flash-light, an outer cylindrical casing open at both ends, a lens positioned at each end of the casing, a cap detachably securing each lens in place, a reflector having an electric light located back of each lens and bearing thereagainst, a metal strip connected to an inner side of the casing having an integral upturned end against which one light contacts, an insulating block positioned adjacent said end, a member hinged to the other end of said strip and lying vertically against which the other light contacts, electrical connections between the lights and reflectors, an inner casing positioned between the insulating block and the hinged member, batteries connected in series within said casing, a pole of one of said batteries having contact with the hinged member, connections leading from the reflectors, a connection leading from the opposed pole of the other battery and switch mechanism for completing a current through a gap between said last named connection and either of the connections from the reflectors.

5. In a flash-light, a cylindrical casing having a lens secured at each end, an electric light and reflector back of each lens, an electric battery within the casing, electrical connections between the light and their respective reflectors, connections between the lights and one pole of the electric battery, electrical conductors connecting with each of the reflectors and leading therefrom to a position adjacent the center of the casing, a connection leading from the opposite pole of the battery to a point adjacent the said conductors but separated therefrom and switch mechanism for bridging the gap between said last conductor and either of the last named conductors, substantially as described.

[Claim 6 not printed in the Gazette.]

1,203,577. PROCESS AND PRODUCT OF TREATING WOOD. HARRY W. BROADY, Bayside, N. Y., assignor to The Lundin Company, Inc., Long Island City, N. Y., a Corporation of New York. Filed Oct. 27, 1915. Serial No. 58,232. (Cl. 99—12.)

1. The process of preserving wood which consists in coating or lining the walls of its recesses or cavities with a fluid mixture of paraffin and bitumen and causing said mixture to harden in the wood.

2. The process of preserving wood which consists in coating or lining the walls of its recesses or cavities with a fluid mixture of paraffin and asphalt and causing said mixture to harden in the wood.

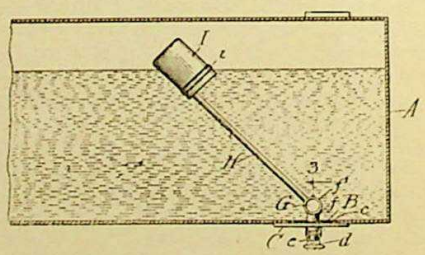
3. The process of preserving wood which consists in coating or lining the walls of its recesses or cavities with a fluid mixture containing bitumen and causing said mixture to harden in the wood.

4. The process of preserving wood which consists in coating or lining the walls of its recesses or cavities with a fluid mixture containing asphalt and causing said mixture to harden in the wood.

5. As a new article of manufacture, wood the walls of the recesses or cavities of which are coated or lined with a hardened mixture of paraffin and bitumen.

[Claims 6 to 8 not printed in the Gazette.]

1,203,578. SURFACE DISCHARGE APPARATUS FOR TANKS. ROBERT A. BROOKS, Chicago, Ill. Filed Jan. 22, 1913. Serial No. 743,481. (Cl. 137—21.)



1. A mounting for the support of a pivoted oscillating delivery pipe for gasolene tanks and the like comprising a base plate secured to the bottom of the tank and serving to close an opening therein, a casting carried by said base plate and extending upward through said opening into the tank and provided with a delivery passage leading through said plate, and a pivotal support for the lower end of the delivery pipe having its bearings in said casting and provided with a passage communicating with the delivery pipe and with the passage in the casting; substantially as described.

2. A mounting for the support of a pivoted oscillating delivery pipe for gasolene tanks and the like comprising a base plate detachably secured to the bottom of the tank and serving to close an opening therein, a casting carried by said base plate and extending upward through the opening in the attaching plate and bottom of the tank

to the interior thereof, and having a delivery passage leading through the base plate, and a pivotal support for the lower end of the delivery pipe mounted in said casting and provided with a passage communicating with the delivery pipe and with the delivery passage in the casting; substantially as described.

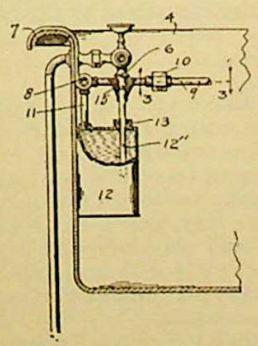
3. A mounting for the support of a pivoted oscillating delivery pipe for gasolene tanks and the like comprising the base, a base plate C detachably secured to the bottom of the tank and serving to close an opening therethrough, a casting F carried by the plate C and extending upward through the opening in the attaching plate and bottom of the tank to the interior thereof, said casting being formed with a housing at its top and having a delivery passage leading through the base plate, a hub G having a bearing in said housing formed in said casting F, a delivery pipe H having its lower end secured to and carried by said hub and communicating with the passage leading through the same and connecting with the delivery passage in the casting F; substantially as described.

4. A mounting for the support of a pivoted oscillating delivery pipe for gasolene tanks and the like comprising an attaching plate K permanently secured to the bottom of the tank and having an opening coincident with an opening B in the latter, a plate C detachably secured to the plate K and formed with a depending internally and externally threaded tubular boss E, a casting F carried by the plate C and extending upward through the opening in the attaching plate and bottom of the tank to the interior thereof, said casting being formed with a housing at its top and having a delivery passage leading through said plate C, a hub G having a bearing in said housing formed in the casting F, a delivery pipe H having its lower end secured to and carried by said hub and communicating with the passage leading through the same and connecting with the delivery passage in the casting F; substantially as described.

5. A mounting for the support of a pivoted oscillating delivery pipe for gasolene tanks and the like comprising the plate C detachably secured to the bottom of the tank and formed with a depending internally and externally threaded tubular boss E and a second internally threaded boss D, a casting F having its externally threaded lower end screwed into the internally threaded upper end of the boss E and extending upward through the opening in the attaching plate and bottom of the tank to the interior thereof, said casting being formed with the laterally disposed housing *f'* at its top and having a delivery passage through it, a hub G having its bearing in the laterally disposed housing *f'* of the casting F and having connecting radial and axial passages, the latter communicating with the passage through the casting F, a delivery pipe H secured to and carried by the hub G and communicating with the passages extending through it, and a drain cock *d* secured in the boss D of the plate C; substantially as described.

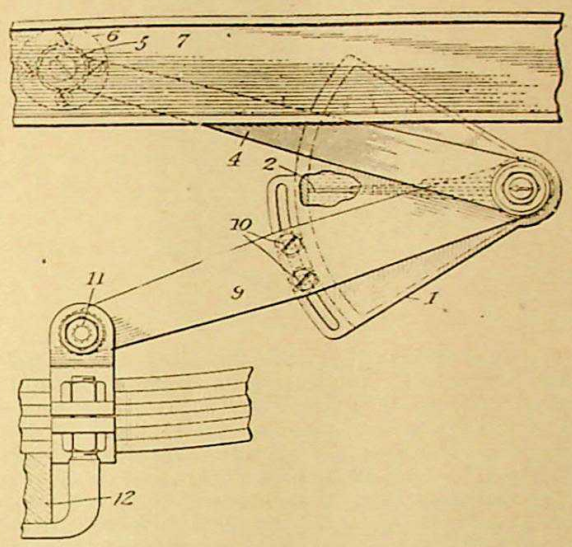
[Claims 6 to 8 not printed in the Gazette.]

1,203,579. BATH-TUB SHOWER AND NEEDLE BATH. HARRY A. CALLON, Indianapolis, Ind. Filed May 12, 1916. Serial No. 97,163. (Cl. 4—26.)



The combination, with a bath tub having hot and cold water faucets, of a shower and needle bath attachment, water conducting means communicating with the latter, said means having an outlet, a gland at said outlet secured to said conducting means, a pipe telescoping through said gland, and an elastic tip on the outer end of the pipe to receive the nozzle with a tight fit.

1,203,580. SHOCK-ABSORBER CONNECTION. RUSSELL S. CARTER, Hewlett, N. Y. Filed Feb. 24, 1914. Serial No. 820,482. (Cl. 21—105.)



1. An elbow type shock-absorber for vehicles, comprising in combination a closed liquid-containing casing, an oscillatory piston member therein, having a hub, two divergent lever arms concentrically disposed with reference to the hub and provided with means at their free ends for pivotally connecting them respectively to the parts between which shock is to be absorbed, one of said arms being fixed to the hub and the other being movably engaged to the vertical side wall of the casing and provided with clamping means whereby said closed casing may be secured thereto in different angular positions.

2. A vehicle shock-absorber, comprising a closed liquid-containing casing having parallel vertical side walls, an oscillatory piston therein having a hub, a lever arm on such hub adapted at its outer end for connection with one of the parts between which shock is to be absorbed, and a member adjustably secured to one of the said vertical side walls and adapted for connection to the other of the parts between which shock is to be absorbed.

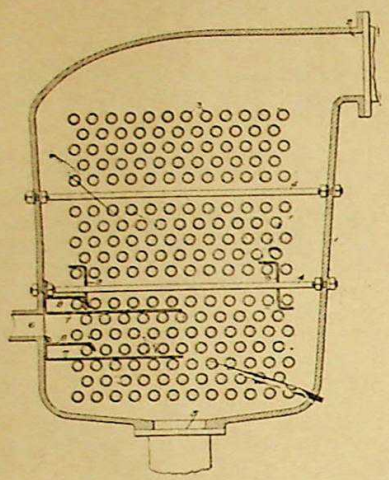
3. A vehicle shock-absorber comprising a closed substantially sector-shaped liquid-confining casing having parallel vertical side walls, an oscillating piston between such walls and a hub for the piston projecting to the exterior thereof, in combination with a pair of members respectively connecting said hub and casing to the parts between which the shock is to be absorbed, both of said means being on the same side of the closed casing and one of them being adjustably fixed to the proximate vertical side wall thereof, whereby the casing can be centered with reference to the piston therein.

4. A vehicle shock-absorber comprising a closed liquid-containing casing having an oscillatory piston therein and a hub for said piston extending to the exterior of the casing, a lever arm on said hub, a boss on the casing, a second arm member hinged to such boss and means for fixing the latter member in different angular positions with reference to said boss.

5. A vehicle shock-absorber comprising a closed liquid-containing casing, an oscillating piston therein connected to one of the parts between which shock is to be absorbed, and means for securing the casing to the other of the parts between which shock is to be absorbed, comprising a member pivotally mounted at one point on the casing and having a bolt-and-slot connection at a remote point with said casing.

[Claim 6 not printed in the Gazette.]

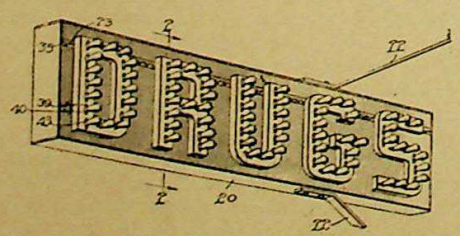
1,203,581. CONDENSER. WILLIAM WYANT CASSIDY, Deadwood, S. D. Filed Aug. 10, 1915. Serial No. 44,714. (Cl. 257—43.)



1. In a condenser of the class described, a casing having a steam inlet at the top thereof, an air outlet adjacent the bottom thereof and a condensate outlet at the bottom of the casing, tie bolts connecting the sides of the casing, rows of cooling tubes disposed transversely of the tie bolts and the air outlet, baffle plates above and below the air outlet extending between the rows of tubes substantially to the middle of the casing and partially lengthwise thereof, and baffle plates above the first-mentioned baffle plates adjacent the air outlet extending through the entire length of the casing, substantially as and for the purpose set forth.

2. In a condenser of the class described, a casing having a steam inlet at the top an air outlet at the side adjacent the bottom and a condensate outlet at the bottom, tie bolts connecting the sides of the plates, rows of cooling tubes within the casing extending transversely of the tie bolts and the air outlet, baffle plates extending from the air outlet above and below the same between the horizontal rows of tubes substantially to the middle of the casing and partially along the casing, baffle plates above each of the first-mentioned baffle plates extending along the casing and located adjacent the air outlet, said second-mentioned baffle plates extending only to the second vertical rows of tubes from the side wall of the casing, and baffle plates extending along the casing between the upper and lower rows of cooling tubes at the tie bolt which is located adjacent the air outlet, said last-mentioned baffle plates being located between the vertical rows of cooling tubes adjacent the sides of the casing.

1,203,582. ELECTRIC SIGN. CHARLES A. CHASE, Chicago, Ill. Filed Oct. 7, 1912. Serial No. 724,424. (Cl. 40—130.)



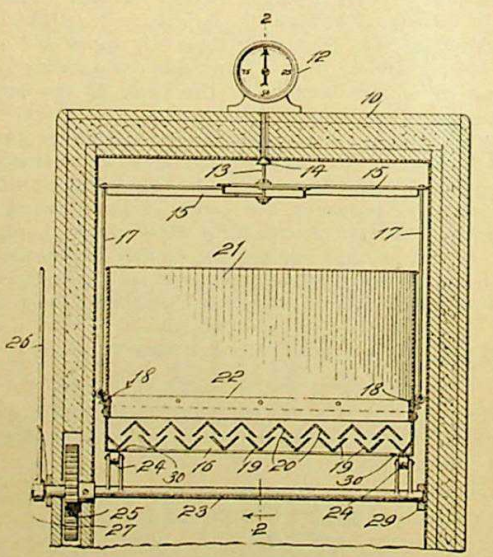
1. In a sign board, a strip of insulating material, a pair of parallel longitudinal conductors spaced apart and embedded therein, a series of lateral conductors extending from each longitudinal conductor toward the other, those connected to one longitudinal conductor alternating with those connected to the other longitudinal conductor, and an exposed contact connected to each lateral conductor, said contacts being arranged in a single line intermediate the longitudinal conductors.

2. In a sign board, a strip of insulating material, a pair of parallel longitudinal conductors spaced apart and embedded therein, a series of lateral conductors extending from each longitudinal conductor toward the other, those connected to one longitudinal conductor alternating with those connected to the other longitudinal conductor, and an exposed contact connected to each lateral conductor, said contacts being arranged in a single line intermediate the longitudinal conductors and projecting beyond the face of the strip.

3. In a sign board, a strip of insulating material, a pair of parallel longitudinal conductors spaced apart and embedded therein, a series of lateral conductors extending from each longitudinal conductor toward the other, those connected to one longitudinal conductor alternating with those connected to the other longitudinal conductor, an exposed contact connected to each lateral conductor, said contacts being arranged in a single line intermediate the longitudinal conductors and projecting beyond the face of the strip, and transverse ribs of insulating material intermediate the contacts.

4. An electric sign board of the class described having a longitudinal slot inclined from the front toward the rear of the sign board, a strip of insulating material arranged in said slot and connected to one of the walls thereof, a pair of longitudinal conductors embedded in said strip, each of said conductors having lateral conductors extending toward the other, the lateral conductors on one longitudinal conductor being arranged intermediate the lateral conductors on the other, a contact arranged on each lateral conductor and projecting beyond the face of the strip, and one or more letters having inclined tangs upon their rear faces, said inclined tangs having conductors adapted to make contact with the contacts within the inclined slot.

1,203,583. WEIGHING DEVICE. CHARLES CLINTON CLARK, New York, N. Y. Filed Nov. 27, 1914. Serial No. 874,281. (Cl. 73—46.)

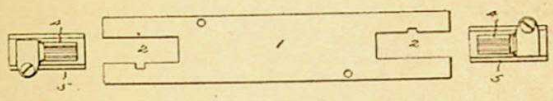


1. An ice weighing device for refrigerators, comprising a tray suspended within the refrigerator, a scale positioned on the upper outer side of the refrigerator, a pair of cross-bars arranged above said tray, each cross-bar having means connected at each end thereof and with the tray for supporting the tray, and a rod removably connected to the cross-bars and scale provided with a closing cap, said tray being provided with a platform and having air channels between the platform and the bottom of the tray, substantially as described.

2. An ice weighing device for refrigerators, comprising a tray suspended within the interior, a scale positioned on the upper outer side of the refrigerator, supporting means

arranged above and connected to said tray for suspending the same, a rod removably connected to said supporting means and scale, a pair of shafts positioned below said tray, a pair of cog-wheels between the inner and outer wall of the refrigerator for connecting said shafts and imparting a rotary movement thereto, and a pair of projecting arms secured to the said shafts near each end thereof, said arms carrying means adapted to form a supporting base for the tray to rest upon.

1,203,584. CUT-OUT BLOCK. ROBERT C. COLE, Hartford, Conn., assignor to The Johns-Pratt Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 29, 1915. Serial No. 63,964. (Cl. 175—273.)



1. A fuse cut-out block consisting of a stamped sheet metal base having openings at its ends, blocks of insulation having portions fitting said openings and retained in operative position by portions of the walls of said openings in the metallic base, and fuse terminal clips mounted on the insulating blocks.

2. A fuse cut-out block consisting of a stamped sheet metal base, insulating blocks slidably mounted on and having portions fitting and retained by portions of the base, means for preventing the accidental sliding of the blocks from the base, and fuse terminal clips mounted on said blocks.

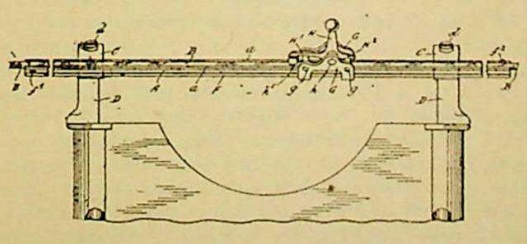
3. A fuse cut-out block consisting of a sheet metal base having a slot that begins at and extends inward from each end, insulating blocks having portions fitting and retained from upward and downward displacement and from movement toward each other by the walls of said slots, and fuse terminal clips mounted on the blocks.

4. A fuse cut-out block consisting of a sheet metal base having mortises extending inward longitudinally at each end, insulating blocks with longitudinal grooves in their sides, said blocks being slidably mounted on the base with the edges of said mortises in the base fitting the grooves in the blocks, and fuse terminal clips mounted on said blocks.

5. A fuse cut-out block consisting of a sheet metal base with insulating blocks bearing spring clips slidably mounted on the base, said blocks having portions engaged and retained by portions of said base, and means for holding the blocks from sliding along the base.

[Claim 6 not printed in the Gazette.]

1,203,585. TYPE-WRITING-MACHINE COPY-HOLDER. JOHN JOSEPH COOPER, London, England, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 20, 1914. Serial No. 813,151. (Cl. 120—29.)



1. The combination of a channel guide for a telegraph strip, a device slidable along the guide, said device including an actuator and means dependent upon a force applied to said actuator in a direction to advance said device for causing the same to bear upon the strip with a yielding pressure sufficient to cause the strip to move with said device, said means being ineffective upon said strip when said device is moved by said actuator in the opposite direction.

2. The combination of a telegraph tape guide, a carriage, and a lever pivoted on the carriage, and having an arm which constitutes a handle, and having another arm extending in the direction of feed, to exert pressure upon the tape, and provided with a pad of soft material to feed the tape.

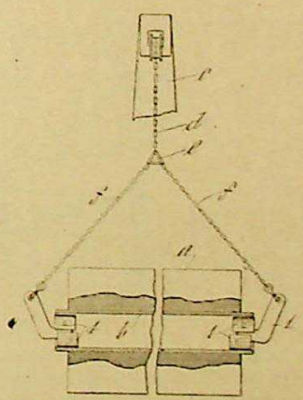
3. The combination with a telegraph tape guide, of a traveler, an actuator by which said traveler may be moved manually to and fro along the guide, and means dependent upon the manual operation of the traveler by said actuator to move the traveler in only one direction for advancing the tape along the guide, the traveler movable along the tape in the opposite direction, whereby the tape may be fed step by step in one direction by moving said traveler to and fro.

4. The combination with a telegraph tape guide, of a traveler, a handle connected to said traveler to move the same to and fro along the guide, and a tape-feeding grip released by said handle when retracting the traveler, but caused by said handle to grip the tape and advance the same when said handle is advancing said traveler, said grip movable along a fresh portion of the tape at each retraction of the traveler to a new gripping position on the tape, so that the tape is fed step by step in one direction.

5. The combination with a telegraph tape channel or guide, of a manually movable traveler, an actuator carried thereby by which the traveler is movable in one direction along said channel independently of the tape, and means dependent upon the movement of the traveler by said actuator in the opposite direction for advancing the tape along the channel, whereby the traveler may be advanced step by step in one direction by operating said actuator to move the traveler to and fro.

[Claims 6 to 10 not printed in the Gazette.]

1,203,586. LIFTING DEVICE. SAMUEL E. COWLES, Woronoco, Mass. Filed Sept. 11, 1915. Serial No. 50,159. (Cl. 57—9.)



1. A core lifter for hollow cores, comprising, in combination, two oppositely arranged segmental plugs, and a link connecting the plugs and movable with respect thereto, said link having a part extending without the core for lifting purposes, said plugs arranged to freely fit within a core and to be directly spread apart by movement of said link and forced against the walls of the core with a toggle action.

2. A core lifter for hollow cores, comprising, in combination, two oppositely arranged segmental plugs, and a link pivotally connecting the latter having an arm extending without the core for lifting purposes, said link arranged normally in inclined relation to the axes of said plugs, whereby the latter are drawn together to permit free insertion in the end of a core, said arm arranged when moved to force said link toward normal relation with the axes of said plugs, whereby the latter are expanded against the interior walls of said core to grip the same with a toggle force.

3. A core lifter for hollow cores, comprising, in combination, split plug elements arranged to freely fit within

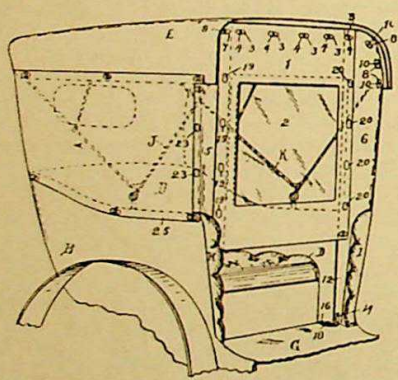
the core, a link normally tilted with respect to said elements, and pivot pins connecting said link and elements, said link having a part extending without the core for lifting purposes, said link arranged when said part is lifted to move toward a normal position with relation to said plug elements and to separate and expand them against the walls of the core, said link formed with arc-shaped bearing surfaces arranged to fit in corresponding surfaces formed in the plugs, whereby strain on the latter is transferred directly to the link without the intermediary of the pivot pins.

4. A tackle mechanism for lifting heavy loads, comprising, a pair of expansible plug elements arranged to freely enter axially alined openings in opposite ends of a load, levers associated with said plug elements and constructed to expand the latter against the interior surfaces of said openings to grip the load with a distributed pressure, and means to connect said levers, said means arranged to be lifted at a point intermediate said levers to simultaneously actuate the latter and equally grip each end of the load.

5. A lifting device, comprising, two oppositely arranged segmental plugs each having an arc-shaped interior recess, an operating lever provided at one end with a spacing and connecting portion for said plugs and movable with respect thereto, the ends of said spacing portion being provided with corresponding bearing surfaces for the walls of the arc-shaped recess, all constructed and arranged so that the lever may move to space the plugs as desired and the force transmitted from the lever to the plugs may bind the latter against the interior surfaces of a load to be lifted.

[Claim 6 not printed in the Gazette.]

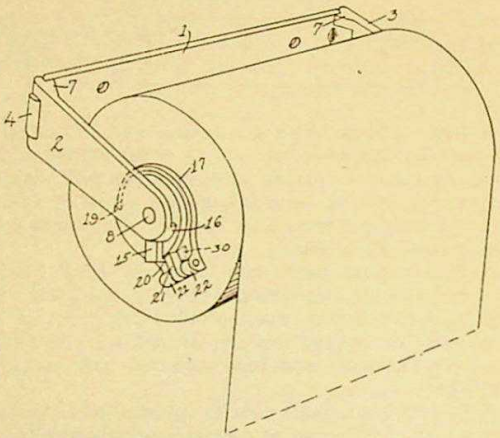
1,203,587. INSIDE WIND-SHIELD FOR VEHICLES. GEORGE V. CRING, Portland, Ind. Filed Sept. 30, 1915. Serial No. 53,238. (Cl. 21—148.)



1. An inside wind-shield for vehicles, comprising a main curtain suspended from a central bow of the vehicle top and adapted to hang down inside the vehicle in the rear of the back of the front seat and in front of the rear seat and adapted to extend to near the floor of the vehicle, the same being of less width than the interior of the vehicle, a transparency in the said main curtain, jamb curtains located on each side of the main curtain and extending outward and rearward and adapted to be attached to the side curtains of the vehicle with their upper edges adapted to be secured to said bow and with their lower edges conforming with the contour of the upholstered sides of the rear seat and adapted to contact therewith, and each terminating in a tongue at its lower end which tongue extends down forward of the rear seat, means for detachably securing said tongues of the jamb curtains to the vehicle, and means for detachably connecting the jamb curtains to the main-curtain, all substantially as set forth.

2. An inside wind-shield comprising a main central curtain adapted to be suspended from the interior of the top of a vehicle and adapted to extend down back of the front seat and near the rear seat and being of less width than the interior of the vehicle, jamb curtains adapted to be attached to each side of the main curtain and extending outward and curved rearward to the side curtains of the vehicle to which they are adapted to be secured and extending down to near the floor of the vehicle, means for detachably connecting the lower ends of the jamb curtains to the body of the vehicle, and means whereby the main curtain may be secured out of operative position in the top of the vehicle, all substantially as shown and described.

1,203,588. PAPER-ROLL HOLDER. JASPER J. CURRIE, Detroit, Mich., assignor to George F. Kearney, Detroit, Mich. Filed Feb. 14, 1916. Serial No. 78,137. (Cl. 211—31.)



1. In a paper roll holder adapted to allow limited forward or reverse rotation of the roll, a spring tending to resist forward rotation of the roll and adapted to reverse the direction of rotation thereof upon release of the roll, means rotatable with the roll limited in the extent of its rotation in either direction, a device held by the roll when of certain diameter adapted to lessen the extent of forward rotation of said rotatable means, said device being released from operative relation upon decrease in diameter of the roll a definite extent whereby the parts are reset to allow full forward rotation of the roll.

2. In a paper roll holder, means for rotatably supporting a paper roll thereon, a rotatable element limited in extent of rotation in either direction, a second element rotatable with the roll, a spring tending to resist forward rotation of said second element, means for holding said second element in fixed relation with the first named element, said means being releasable to allow a definite movement of the second named element relative to the first named element, said means being engaged by the roll as to be held in operative relation when the roll is of a certain diameter and released from operative relation to allow relative movement of the two elements when the diameter of the roll has been decreased a certain extent.

3. In a paper roll holder adapted to rotatably support a paper roll, a rotatable element, a stop limiting the extent of rotation thereof in either direction, an element rotatable with the roll, means for holding said second named element in fixed relation with the first named rotatable element, said means being adapted to be held in operative relation by the roll and released from such relation when the roll has been decreased in diameter a certain extent, and a spring connected with said second named element placed under tension by forward rotation of the roll and adapted to return the parts to original relation upon release of the roll.

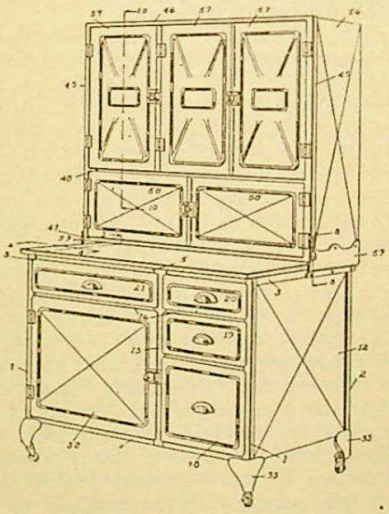
4. In a paper roll holder adapted to rotatably support a paper roll, a rotatable element, a stop limiting the extent of rotation thereof in either direction, an element rotatable with the roll adapted to rotate the first named element, the second named element being also adapted for limited movement relative to the first named element, a spring controlled latch member or pawl forced to posi-

tion by the roll when of full diameter to hold the two elements in fixed relation to rotate as a unit, said pawl being releasable to allow a relative movement of the two elements as the roll becomes reduced in diameter a certain extent in use, and a spring tending to resist forward rotation of the roll adapted to turn the parts to original position upon release of the roll.

5. In a paper roll holder, a bracket, a shaft adapted to rotatably support a paper roll, a limiting device rotatable on the shaft, a stop limiting the extent of rotation of said device in either direction, an element rotatable with the roll adapted to rotate the limiting element and having limited movement relative thereto, a pawl adapted to hold the two elements in fixed relation to rotate as a unit, said pawl being adapted to be held in operative relation by the roll when of certain diameter, a spring for forcing the pawl out of operative relation when the roll has been reduced in diameter to an extent sufficient to release the pawl, and a spring yieldably resisting forward rotation of the roll and adapted to return the roll and rotatable elements to original position upon release of the roll.

[Claims 6 to 10 not printed in the Gazette.]

1,203,589. KITCHEN-CABINET. DWIGHT R. CURTENIUS, Kalamazoo, Mich., assignor to Kalamazoo Stove Company, Kalamazoo, Mich. Filed June 15, 1914. Serial No. 845,185. (Cl. 45—16.)

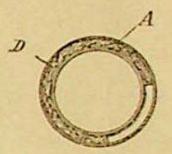


1. A cabinet structure comprising upright corner members, angle iron end top pieces secured to the upper ends of said corner members, said top pieces being provided with upwardly projecting arms having inwardly projecting flanges at their upper edges constituting top slides, and a top comprising a rectangular angle iron frame, the rear members of said frame being provided with L-shaped slots open at their lower edges and adapted to receive the said slides and their supporting arms with the projections formed by the slots extending under the slides and constituting keepers, said slides having L-shaped slits, the slit portions being struck down to provide openings through which said keepers may be introduced, the downturned portions constituting guides for the keepers.

2. A cabinet structure comprising upright corner members, end top pieces secured to the upper ends of said corner members, said top pieces being provided with upwardly projecting arms having upwardly projecting flanges at their upper edges constituting top slides, and a top comprising a rectangular angle iron frame, the rear members of said frame being provided with L-shaped slots open at their lower edges and adapted to receive the said slides and their supporting arms with the projections formed by the slots extending under the slides and constituting keepers, said slides having L-shaped slits, the slit portions being struck down to provide openings through which said keepers may be introduced, the downturned portions constituting guides for the keepers.

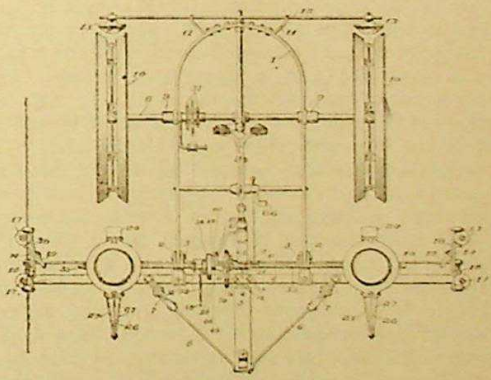
3. A cabinet structure comprising upright corner members, end top pieces secured to the upper ends of said corner members, said top pieces being provided with upwardly projecting arms having inwardly projecting flanges at their upper edges constituting top slides, and a top comprising a rectangular angle iron frame, the rear members of said frame being provided with L-shaped slots open at their lower edges and adapted to receive the said slides and their supporting arms with the projections formed by the slots extending under the slides and constituting keepers, said slides having openings through which said keepers may be introduced.

1,203,590. MEDICATED POULTRY-BAND. ISAAC OTIS DAY, Ottumwa, Iowa. Filed Mar. 2, 1915. Serial No. 11,612. Renewed Mar. 9, 1916. Serial No. 83,171. (Cl. 119—156.)



A medicated ring adapted to be passed over the leg of a fowl, comprising a resilient hollow annular casing which is split and separated at one point along its circumference, and an absorbent material containing a suitable chemical located inside said casing.

1,203,591. CLUTCH MECHANISM FOR CORN-PLANTERS. SAMUEL K. DENNIS, Chicago, Ill., assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Apr. 8, 1911. Serial No. 619,643. (Cl. 111—5.)



1. In a planter, a seed shaft, a rotary clutch mechanism controlling the movement thereof including a pivoted pawl, and an adjustable swinging cam having a plurality of pawl engaging surfaces thereon independently engageable with said pawl in different positions of said cam.

2. In a planter, a seed shaft, rotary clutch mechanism controlling the connection thereof including a pivoted pawl, a cam pivoted at one side of said shaft having pawl engaging arms extending on opposite sides of said shaft, and means for adjusting said cam about its pivot.

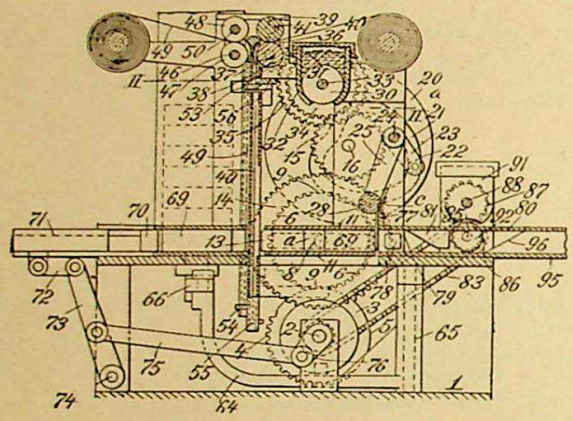
3. In a planter, a seed shaft, rotary clutch mechanism controlling the connection thereof including a pivoted pawl, a cam pivoted at one side of said shaft having pawl engaging arms extending on opposite sides of said shaft, and means carried by one of said pawl engaging arms above said shaft for adjusting said cam about its pivot.

4. In a planter, a seed shaft, rotary clutch mechanism controlling the connection thereof including a pivoted pawl, a cam pivoted at one side of said shaft having pawl engaging arms extending on opposite sides of said shaft, and cam adjusting means supported by said cam in the interval between its arms and engageable with said frame.

5. In a planter, a seed shaft, rotary clutch mechanism controlling the connection thereof including a pivoted pawl, a cam pivoted at one side of said shaft having pawl engaging arms protruding therefrom on opposite sides of said shaft, one of said arms having an arcuate cam surface and the other having a projection thereon, and means for adjusting said cam whereby said pawl may engage either said cam surface or said projection.

[Claims 6 to 13 not printed in the Gazette.]

1,203,592. WRAPPING-MACHINE. HILARIO DE ESCOBALES, New York, N. Y. Filed Feb. 10, 1915. Serial No. 7,280. (Cl. 93—2.)



1. A wrapping machine comprising a wrapper folding channel; means whereby an article, a strip of narrow tape and a wrapper can be forced into said wrapper folding channel, whereby certain portions of the tape and wrapper are folded upon the article, said tape being folded between the article and the wrapper; means whereby paste can be applied to an unfolded portion of said wrapper, an unpasted and unfolded portion of said tape then protruding beyond the edge of said unfolded portion of the wrapper; means whereby said article, tape and wrapper can be moved from said wrapper folding channel; and means for causing said tape and paste coated wrapper to be folded upon the wrapper folded upon the article.

2. A wrapping machine comprising a wrapper folding channel and a plunger having reciprocating movement in line therewith; a support for an article between said plunger and said channel, a support for a wrapper between said article and said channel, and a support for a narrow tape between said wrapper and said article; means for actuating said plunger whereby forward movement thereof causes said article to be forced against said tape and wrapper, further forward movement of said plunger causing said article, tape and wrapper to be forced into said wrapper folding channel, whereby said tape and wrapper are folded upon the article; means whereby paste can be applied to an unfolded portion of said wrapper, an unpasted and unfolded portion of said tape then protruding beyond the edge of said unfolded portion of the wrapper; means whereby said article tape and wrapper can be moved from said wrapper folding channel; and means for causing said tape and paste coated wrapper to be folded upon the wrapper folded upon the article.

3. A wrapping machine comprising a stationary frame and an intermittently rotatable wrapper folding channel section having upper and lower plates and inwardly extending side projections; means whereby an article, a strip of narrow tape, and a wrapper can be forced into said rotatable channel section, whereby said upper and lower plates cause said tape and wrapper to be folded upon the article, and whereby said inwardly extending side projections cause certain other portions of the wrapper to be folded upon the article; means for causing rotary movement of said channel section, whereby unfolded portions of said wrapper and tape are forced against said stationary frame thereby causing said tape and wrapper to be further folded upon the article; means whereby paste can be applied to an unfolded portion of said wrapper, an unpasted and unfolded portion of said tape then protruding beyond the edge of said unfolded portion of the wrapper; and means whereby said article, tape and wrapper can be moved from said channel section, whereby said unpasted tape and said paste coated wrapper are forced against said stationary frame, thereby causing said tape and paste coated wrapper to be folded upon the wrapper folded upon the article.

4. A wrapping machine comprising a wrapper folding channel having inwardly extending side projections, an upper plate provided with downwardly extending inclined side folders, and a lower plate provided with upwardly extending inclined side folders; means whereby an article, a strip of narrow tape, and a wrapper can be forced into said wrapper folding channel, whereby said upper and lower plates cause said tape and wrapper to be folded upon the article; a portion of said tape then protruding beyond one edge of said wrapper; means whereby said article, tape and wrapper can be forced through said wrapper folding channel whereby certain unfolded side portions of the wrapper are forced against said inwardly extending side projections, thereby causing said side portions to be folded upon the article, and whereby upper unfolded side flaps of the wrapper are forced against said inclined side folders of the upper plate thereby causing said upper flaps to be folded upon the article; and lower unfolded side flaps of the wrapper are forced against said inclined side folders of the lower plate, thereby causing said lower flaps to be folded upon the article.

5. A wrapping machine comprising an intermittently rotatable channel section having upper and lower plates and inwardly extending side projections; a stationary wrapper folding channel in line therewith, and having inwardly extending side projections, an upper plate provided with downwardly extending inclined side folders, and a lower plate provided with upwardly extending inclined side folders; means whereby an article and a wrapper can be forced into said rotatable channel section, whereby said upper and lower plates and inwardly extending side projections thereof cause certain portions of the wrapper to be folded upon the article; means for causing rotary movement of said channel section, whereby an unfolded portion of said wrapper is forced against one of the plates of said stationary wrapper folding channel, thereby causing said wrapper to be further folded upon the article; means whereby said article and wrapper can be moved from said rotatable channel section and through said stationary wrapper folding channel, whereby said inwardly extending side projections of the stationary channel cause certain unfolded side portions of the wrapper to be folded upon the article, said downwardly extending inclined side folders causing upper unfolded side flaps of the wrapper to be folded down upon the article; means whereby paste can be applied to lower unfolded side flaps of the wrapper during their travel through said stationary channel; and said upwardly extending inclined side folders causing said lower paste coated side flaps to be folded up against said folded upper flaps.

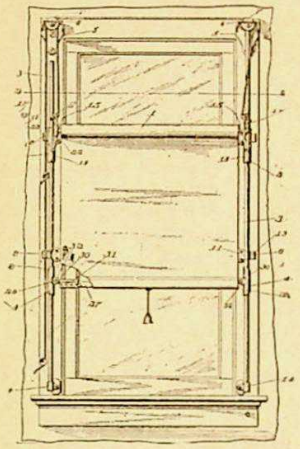
[Claims 6 to 11 not printed in the Gazette.]

1,203,593. SHADE-CARRIER. HAYWOOD GUION DEWEY, Westminster, and OSCAR D. GREEN, Baltimore, Md. Filed Aug. 3, 1914. Serial No. 854,844. (Cl. 156—27.)

1. In a window shade carrier, vertical guide rods, each rod being formed in a plurality of pieces, the adjacent ends of the several pieces being reduced, means for supporting the upper and lower ends of the rods and intermediate brackets, each bracket having a ferrule of outside diameter equal to the diameter of the rod, the opening in the ferrule being adapted to receive the adjacent ends of the several pieces forming the guides.

2. In a window shade carrier, vertical guide rods, each rod being formed in a plurality of pieces, the adjacent ends of the several pieces being reduced, means for supporting the upper and lower ends of the rods, intermediate

brackets, each bracket having a ferrule of outside diameter equal to the diameter of the rod, the opening in the ferrule being adapted to receive the adjacent ends of the several pieces forming the guides, and followers mounted on the rod and provided with ears to receive the pivots of the curtain roll, the followers being in the form of longitudinally slotted tubes, the slots being separated from the points of suspension by an arc of substantially ninety degrees.



3. In a window shade carrier, vertical guide rods, each rod being formed in a plurality of pieces, the adjacent ends of the several pieces being reduced, means for supporting the upper and lower ends of the rods, intermediate brackets, each bracket having a ferrule of outside diameter equal to the diameter of the rod, the opening in the ferrule being adapted to receive the adjacent ends of the several pieces forming the guides, and followers mounted on the rod and provided with ears to receive the pivots of the curtain roll, the followers being in the form of longitudinally slotted tubes, the slots being separated from the points of suspension by an arc of substantially ninety degrees, the intermediate brackets having an L-shaped web supporting the ferrules.

4. In a window shade carrier, vertical guide rods, each rod being formed in a plurality of pieces, the adjacent ends of the several pieces being reduced, means for supporting the upper and lower ends of the rods, intermediate brackets, each bracket having a ferrule of outside diameter equal to the diameter of the rod, the opening in the ferrule being adapted to receive the adjacent ends of the several pieces forming the guides, and followers mounted on the rod and provided with ears to receive the pivots of the curtain roll, the followers being in the form of longitudinally slotted tubes, the slots being separated from the points of suspension by an arc of substantially ninety degrees, the brackets and followers being made of sheet metal.

5. In a window shade carrier in combination vertical guide rods, intermediate supporting members for the rods in the form of an L-shaped bracket, followers mounted on the rods and provided with means for supporting a curtain roll, the followers being in the form of longitudinally slotted tubes and means for supporting the vertical rods at their ends.

[Claims 6 and 7 not printed in the Gazette.]

1,203,594. COLOR CONCENTRATE FOR EDIBLE FATS. CARLETON ELLIS, Montclair, N. J. Filed Dec. 16, 1915. Serial No. 67,139. (Cl. 99—13.)

1. A butter coloring composition comprising the dry liquid constituents of butter fat freed from considerable quantities of the other constituents of normal butter, and being highly charged with artificial coloring matter capable of tinting butter a yellow shade.

2. A butter color concentrate comprising the liquid constituents only of butter fat substantially free from water and casein and at least partially freed from stearin and saturated with yellow coloring matter.

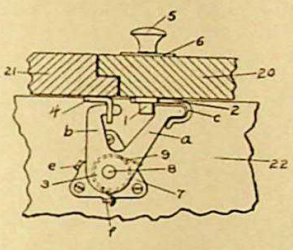
3. A butter color concentrate comprising those constituents only of butter fat which are liquid at ordinary temperatures, the same being substantially free from water and from casein, said material being substantially saturated with yellow coloring matter, all in a sterile condition.

4. A butter color concentrate comprising the liquid constituents only of butter fat substantially saturated with yellow coloring matter.

5. A butter coloring composition comprising at least the normally liquid constituents of butter fat free from casein and containing materially less stearin than ordinary butter, and substantially saturated with yellow coloring material.

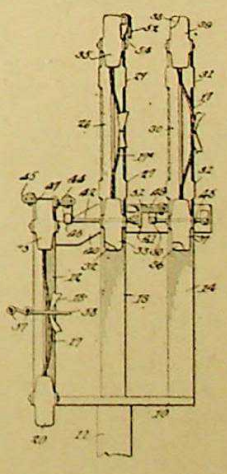
[Claims 6 to 9 not printed in the Gazette.]

1,203,595. DOOR-CATCH. CHRISTIAN EVENSEN, Choteau, Mont. Filed Mar. 13, 1916. Serial No. 83,852. (Cl. 70—119.)



In a door catch, a foot-shaped arm, being pivoted at its inner end to shelf or case, and having its longitudinal center line disposed obliquely to the plane of the closed door; in conjunction with door parts comprising a spring-actuated plunger and an adjacent hook so located that when the door is being closed, the inner end of the plunger strikes the arm near its outer end, the aforesaid oblique disposal of the arm, together with the closing movement of the door, causing the arm to engage the hook, in which engagement the arm and the hook are retained by the plunger, all substantially as described for the purpose specified.

1,203,596. DELIVERY APPARATUS. EDWARD J. FENINGER and JOHN O'NEAL, Spokane, Wash. Filed Aug. 28, 1916. Serial No. 117,329. (Cl. 258—26.)



1. A delivery apparatus comprising a plurality of carriers, a holder for each carrier, said holders being arranged in a row and the holders beyond the first one in the row being slidable, means for sustaining the slidable holders above the level of the first holder, and means for releasing the slidable holders in succession.

2. A delivery apparatus comprising a plurality of carriers, a holder for each carrier, said holders being arranged in a row and the holders beyond the first one in the row being slidable, means for sustaining the slidable holders

above the level of the first holder, means controlled by the first holder for releasing the first slidable holder, and means controlled by the first slidable holder for releasing the next slidable holder.

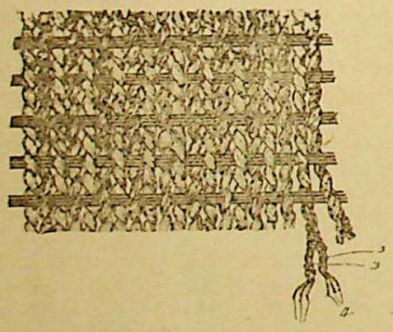
3. A delivery apparatus comprising a plurality of carriers, a holder for each carrier, said holders being arranged in a row and the holders beyond the first one in the row being slidable, means for sustaining the slidable holders above the level of the first holder, grippers on the holders for the respective carriers, said grippers having parts which move when the carriers are removed, a keeper for the sustaining means of the first slidable holder operatively connected to the movable gripper part of the first holder, and a keeper for the sustaining means of the second slidable holder operatively connected to the movable gripper part of the first slidable holder.

4. A delivery apparatus comprising a carrier, a holder for the carrier, grippers on the holder engaging the carrier, one of the grippers having a part which moves when the carrier is removed, a second carrier, a vertically slidable holder for said second carrier, a latch for sustaining said slidable holder in elevated position, a movable keeper for the latch, and an operative connection between the keeper and the aforesaid movable gripper part.

5. A delivery apparatus comprising a carrier, a holder for the carrier, grippers on the holder engaging the carrier, one of the grippers having a part which moves when the carrier is removed, a second carrier, a vertically slidable holder for said second carrier, a latch adapted to be positioned beneath the slidable holder when in elevated position for holding the same in that position, a movable keeper for the latch, and an operative connection between the keeper and the aforesaid movable gripper part.

[Claim 6 not printed in the Gazette.]

1,203,597. GRASS FLOOR-COVERING. JOHN A. FENTON, Oakland, Cal. Filed Feb. 15, 1915. Serial No. 8,158. (Cl. 139—9.)



1. A fabric composed of groups of warp strands lying in substantially straight parallel lines, a weft of cords interwoven between said strands so as to embed said warp groups of strands therein, said cords comprising a plurality of coiled strands each consisting of a plurality of coiled grass fibers.

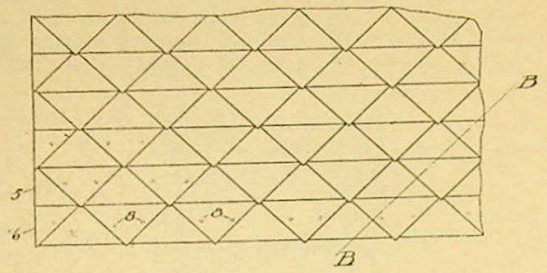
2. In a fabric comprising sea-grass twisted into strands, said strands coiled into cords and said cords forming the weft of the fabric, and groups of warp strands interwoven with and embedded by said weft strands.

1,203,598. ROOFING-STRIP. SILAS M. FORD, St. Paul, Minn. Filed Mar. 6, 1916. Serial No. 82,381. (Cl. 108—7.)

1. As an article of manufacture a roofing strip having multiple parallel plaits formed therein running at an acute angle to the lower edge of said roofing strip and a second series of parallel plaits running at a different acute angle with the lower edge of said roofing strip.

2. As an article of manufacture a roofing strip having a series of multiple parallel plaits running diagonally across said roofing strip, and a second series of multiple parallel plaits running diagonally across said roofing strip and joining said first series of plaits.

3. As an article of manufacture a roofing strip having a series of diagonal plaits therein, and a second series of diagonal plaits crossing said first series of diagonal plaits.

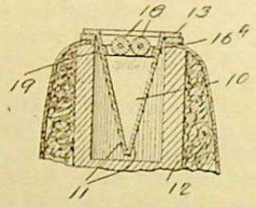


4. As an article of manufacture a roofing strip having a series of diagonal plaits therein, a second series of diagonal plaits crossing said first series, said two series of diagonal plaits joining below the lower edge of said roofing strip.

5. As an article of manufacture a roofing strip having therein a series of plaits running across the face of said roofing strip at one angle, a second series of diagonal plaits running across the face of said roofing strip at a different angle, each one of the plaits in said first series crossing one of the plaits of said second series, said plaits being formed in one instance right-handedly, and in the other instance left-handedly, so that a roofing strip so formed may register and lock with a similar strip superimposed on said roofing strip in shingle fashion.

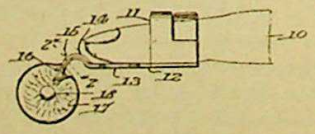
[Claims 6 to 11 not printed in the Gazette.]

1,203,599. TRAIN-CHECK HOLDER. ALFRED L. FRAIL, Wellsville, Ohio. Filed Mar. 5, 1914. Serial No. 822,722. (Cl. 40—10.)



A train check holder comprising a casing open at one end and having a lateral flange surrounding its open end whereby said casing may be secured in a socketed support, a frame secured within the casing and said flange being parallel to a plane passing over the upper surface of the frame, and a pair of elastic rollers having a fixed journal in opposite sides of the frame and having the adjacent portions of their peripheries spaced apart a relatively small distance whereby said rollers will exert pressure on a train check forced therebetween.

1,203,600. CHERRY-PITTING DEVICE. NILES O. FRENCH, Dexter, Iowa. Filed Aug. 16, 1915. Serial No. 45,664. (Cl. 146—5.)



1. In a cherry pitter of the class described, a finger clasp having a rectangular portion of the sides removed, allowing the remaining sides to pass each other in the same circular plane; a portion of the ends of said remaining sides to be curved outwardly, all as substantially set forth.

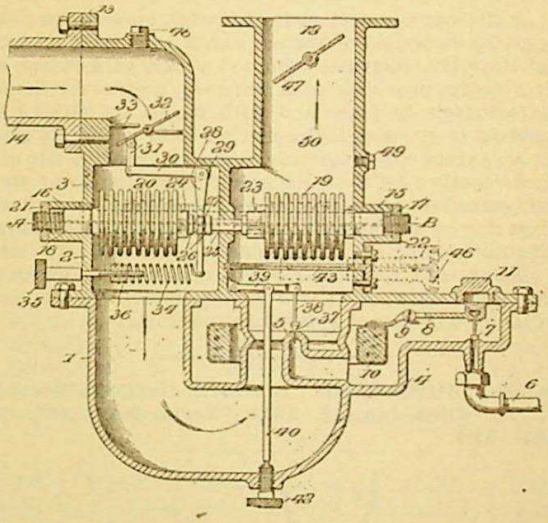
2. In a cherry pitter of the class described, a bar or sheet of metal having a curved neck and eye in one end;

a pointed projection on the inner edge of the sides and at the end of said eye, and set at or near right angles in an upward direction from said eye, all as substantially set forth and described.

3. In a cherry pitter, the combination of a bar or sheet of metal having an enlarged surface, a curved neck, an oblong oval eye in the neck, a pointed projection on the edge of said eye, all on one end and a finger clasp secured to the other end of said bar, substantially as set forth and for the purpose described.

4. In a fruit pitting device, a supporting member designed to be mounted along an intermediate portion of a finger, an arm projecting from such member and adapted to be engaged by a part of the finger extending forward beyond said first member, and a curved portion at the end of said arm having an eye.

1,203,601. CARBURETER. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Feb. 4, 1914. Serial No. 816,574. (Cl. 261—39.)



1. In a carbureter, a conduit one end of which is for connection with an internal combustion engine, a valve located at the inlet end of the conduit to control the volume of air supplied to the conduit, means for spraying liquid fuel into the air in the conduit, and a compound thermosensitive device having a connection with said valve and responsive to the temperatures of the incoming air and the outgoing air mixture for operating said valve to proportion the air supply to the varying fuel supply for maintaining a constant composition of the mixture.

2. In a carbureter provided with a valve-controlled air supply and means for spraying liquid fuel into the air current, thermosensitive means exposed to both the entering air and to the air and fuel mixture for operating said inlet valve whereby a constant composition of air and fuel is delivered by said carbureter.

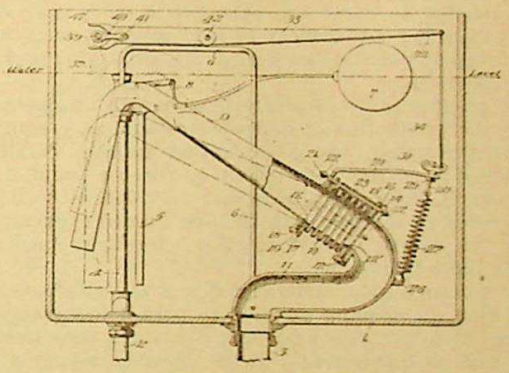
3. In a carbureter, a conduit one end of which is for connection with an internal combustion engine, a valve located at the inlet end of the conduit to control the volume of air supplied to the conduit, means for introducing liquid fuel into the air in the conduit, and means for effecting the mixture of air and fuel, a compound thermosensitive device having a connection with said valve responsive to the temperature of the incoming air and outgoing air mixture for operating said valve to proportion the air supply to the varying fuel supply for maintaining a constant composition of the mixture.

4. In a carbureter adapted for operation under reduced pressure in connection with internal combustion engines, the combination of a carbureter chamber wherein the air and fuel vapor are mixed, said chamber having an air inlet, and a valve controlled discharge outlet, a valve in said inlet controlling the air supply and a thermostatic device having one member in the path of the air supply and having a connection with the inlet valve and another member in the path of the mixed air and vapor.

5. In a carbureter, a conduit one end of which is for connection with an internal combustion engine, a valve located at the inlet end of said conduit to control the volume of air supplied to the conduit, a compound thermosensitive device having a connection with said valve and consisting of connected thermosensitive elements one of which is exposed to the incoming air and the other to the outgoing air mixture, and adjusting means yieldingly connected to said valve and device for adjusting the carbureter to deliver a predetermined and constant air and fuel mixture.

[Claims 6 to 10 not printed in the Gazette.]

1,203,602. FLUSH-TANK. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Apr. 28, 1914. Serial No. 834,974. (Cl. 4—5.)



1. In a flush tank, a discharge pipe, a siphon tube, a flexible tubular connection between said elements, flange means for securing the connection to said pipe and tube, and means for flexing said connection and limiting means consisting of a rod and sleeve between the ends of which said flange means has a play for limiting the flexure of said connection.

2. In a flush tank, a siphon tube therein having a horizontally flattened bend, the shorter leg of the siphon including the bend having a sectional area which is larger than that of the delivery end of the tube, a flexible corrugated metal tube connected to said delivery end, hinge members for directing the flexure of said last named tube about a point between the ends of the same, resilient means normally acting on the siphon to hold it in a raised position, and means for limiting the flexure of said tube on both sides of its normal position.

3. In a flush tank, the combination of a discharge pipe, a siphon tube, a flexible corrugated metal tube connecting said siphon and pipe, and means for limiting the flexure of said connection comprising a member fast on one of said inflexible sections and a rod having stop means loosely engaging said member and fast to a stationary part at its opposite end.

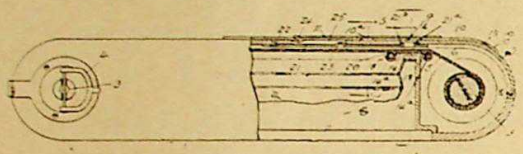
4. In a flush tank, the combination of a discharge pipe, a siphon tube having a hinged support on said pipe, yielding means for normally holding said siphon in a predetermined position, a flexible corrugated metal tube connecting said siphon and said metal pipe, and means comprising rigid members fast to said siphon and pipe and a rod provided with stop means having loose engagement with one of said members and held by the other member for limiting the flexure of said flexible connection.

5. In a flush tank, the combination of a discharge pipe, a siphon tube and a corrugated metal tube connected between said elements, an adjustable yielding means having a connection to said siphon for normally holding said tube in a predetermined position, a rod provided with stop nuts and supported on said tube and pipe for limiting the

flexure of said connection in one direction and a sleeve on said rod for limiting the flexure of the connection in the opposite direction.

[Claims 6 to 8 not printed in the Gazette.]

1,203,603. PHOTOGRAPHIC APPARATUS. HENRY J. GAISMAN, New York, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed June 25, 1914. Serial No. 847,356. (Cl. 95—1.1.)



1. A photographic camera provided with an opening to permit the production of designations against a contained sensitized element, and a protecting member carried by the camera and movable relatively thereto parallel with the plane of the camera wall, said protecting member being adapted to cover and expose said opening in different positions of adjustment of said member, with means for retaining said member over said opening for excluding light therefrom.

2. A photographic camera provided with an opening to permit the production of designations against a contained sensitized element, and a protecting member carried by the camera and movable relatively thereto parallel with the plane of the camera wall, and provided with an opening adapted to register with the first named opening, with means for retaining said member over said opening to exclude light therefrom.

3. A photographic camera having a movable cover provided with an opening adapted to permit designations to be made therethrough against a contained sensitized element, and a supplemental cover movably mounted upon the first named cover, adapted to be moved parallel with the plane of said cover, and provided with an opening to register with the first named opening, and means to movably support the supplemental cover in operative relation to the first named opening.

4. The combination with a photographic camera body provided with an opening in a wall thereof adapted to permit arbitrary designations to be made against a contained sensitized element, and a support to hold a portion of said element immediately adjacent said opening, of a cover slidably mounted upon the camera to normally protect said opening and adapted to be moved to expose said opening, the said camera wall being located between the cover and the sensitized element.

5. The combination with a photographic camera having a cover provided with an opening adapted to permit arbitrary designations to be made against a contained sensitized element and a support to hold a portion of said element immediately adjacent said opening, of a supplemental cover slidably mounted upon the exterior of the first named cover to normally protect said opening and adapted to be moved to expose said opening and exterior guides upon the first named cover slidably receiving the supplemental cover.

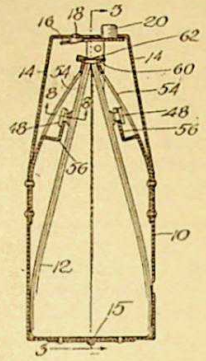
[Claims 6 to 18 not printed in the Gazette.]

1,203,604. POCKET SPUTUM-CUP. WILLIAM M. GARRISON, Hebron, Me. Filed Oct. 15, 1912, Serial No. 725,773. Renewed Sept. 19, 1916. Serial No. 121,085. (Cl. 4—39.)

1. A sputum cup comprising a casing and a collapsible receptacle removably mounted within said casing, said casing being provided with interior springs for closing the mouth of the receptacle when the casing is closed.

2. A sputum cup comprising a casing made in two parts hinged together and a collapsible receptacle removably mounted within said casing, said casing being provided with interior springs for holding the mouth of said receptacle closed against leakage when said casing is closed.

3. A sputum cup comprising a casing made in two parts hinged together on the bottom and a receptacle of waterproof material removably mounted within said casing; said receptacle being formed of one piece and open at the top and said casing being provided with interior spring-actuated means for holding the receptacle closed when the casing is closed.

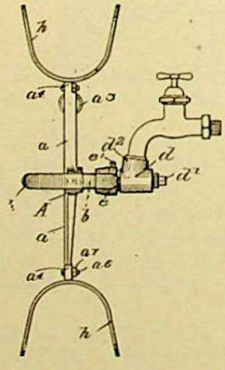


4. A sputum cup comprising a casing made in two parts hinged together on the bottom and a receptacle of waterproof material removably mounted within said casing, said casing being provided with interior means for holding said receptacle in place and with means for closing said receptacle to prevent leakage when said casing is closed.

5. A sputum cup comprising a casing made in two parts hinged together on the bottom and a receptacle of waterproof material removably mounted within said casing, said casing being provided with interior spring-actuated means for holding said receptacle in place and with means for closing said receptacle to prevent leakage when said casing is closed.

[Claims 6 to 32 not printed in the Gazette.]

1,203,605. HOSE-REEL. EDWIN P. GAYLORD, Rochester, N. Y. Filed Jan. 18, 1915. Serial No. 2,826. (Cl. 137—31.)

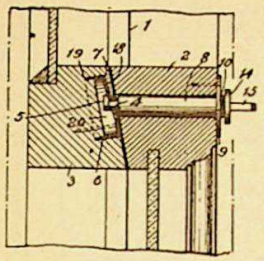


A hose reel comprising an integral frame or body portion having a series of arms, one of which is hollow and provided with inlet and outlet openings at its inner and outer ends respectively, the outer end of each arm having a rectangular socket in one face thereof, of an integral yoke member detachably connected to each arm and including a lug engaging the aforesaid socket and provided with a slot or opening having one wall inclined with respect to the other, and a bolt member attached to the arm and coöperating with said slot in the lug of the yoke member.

1,203,606. WINDOW-LOCK. HENRY GEORGE, Brooklyn, N. Y. Filed July 19, 1915, Serial No. 40,668. Renewed June 1, 1916. Serial No. 101,158. (Cl. 16—143.)

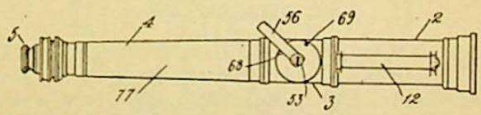
1. In a lock for windows, the combination of a short cap or thimble having one end open, said end adapted to be inserted in a recess in the sash rail, said cap having its other end closed providing a bottom having an elongated

opening therein, the bottom being flat adjacent one side of said opening and being shaped to have a cam surface on the other side, the flat side of the bottom being joined to the inside by an abrupt shoulder, and means adapted to be mounted in an adjacent sash to engage the inclined portion of the bottom of said cap.



2. In a lock for windows the combination of a short cap or thimble having one end open, said end adapted to be inserted in a recess in a sash rail, said cap having its other end closed providing a bottom with an elongated opening therein, the bottom being flat adjacent one side of said opening and shaped to have a cam surface on the other side, the flat side being joined to the inclined side by an abrupt shoulder, a tubular casing adapted to be mounted in a bore through the rail of an adjacent sash in line with said cap, said casing having a perforated nipple in one end adjacent the cap providing a bearing, a bar in said casing having one end projecting through said bearing, and having a finger on said end to enter said opening in the bottom of the cap to engage the cam surface, a sleeve or bushing mounted on said bar at its opposite end extending into the opposite end of the casing, a coiled spring in the casing surrounding the bar and engaging the sleeve and bearing to retract said finger, a handle secured to the bar adjacent said bushing, a perforated disk receiving the end of the casing remote from the bearing, the said end of the casing being formed over to provide a lip to engage the face of the disk and means for securing said disk to said adjacent sash rail.

1,203,607. HOSE-NOZZLE. JESSE G. GLADDING, Providence, R. I. Filed July 15, 1914. Serial No. 851,188. (Cl. 137—17.)

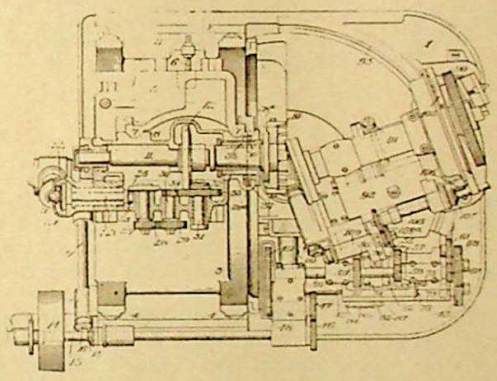


1. In a hose nozzle, the combination of a body provided with a large circular opening in its side, and with a small circular opening in its side opposite the large opening, a valve seat transversely disposed in the body extending to the large opening, a valve rotatably mounted in the seat extending to the large opening, a projection upon one end of the valve, a projection upon the opposite end of the valve extending through the small opening, each of said projections being provided with flat side faces, and with threaded openings, a bail provided with recesses having flat sides adapted to receive the flat faces of the projections, screws in the threaded openings, and heads on the screws engaging the bail.

2. In a hose nozzle, the combination of a body provided with a large circular opening in its side, and with a small circular opening in its side opposite the large opening, a transversely disposed frusto-conical valve seat in the body extending to the opening, an annular inwardly directed seat upon the side of the body concentric with the first mentioned seat and concentric with the small opening, a valve comprising an inclined side registering with the conical valve seat, an end wall bearing against the annular seat, a projection upon the first mentioned end wall, a projection upon the other end wall extending through the smaller opening, each of said projections being provided with flat side faces, and with threaded openings, a bail provided with recesses having flat sides adapted to receive the flat faces of the projections, cavities in the bail adjacent said recesses, screws in the threaded openings, and heads upon the screws registering in the cavities.

3. In a hose nozzle, the combination of a body provided with a frusto-conical valve seat, a frusto-conical valve mounted in said seat and having an exposed outer end wall and an inclosed inner end wall, said valve having coaxial projections, said projections being provided with longitudinally disposed threaded openings, an operating bail having bifurcated ends non-revolubly mounted on said projections, and adjusting means coöperating with said threaded openings.

1,203,608. GEAR-CUTTING MACHINE. JAMES E. GLEASON, ARTHUR L. STEWART, and EDWARD W. BULLOCK, Rochester, N. Y., assignors to Gleason Works, Rochester, N. Y., a Corporation of New York. Filed June 8, 1914. Serial No. 843,720. (Cl. 90—9.)



1. In a gear cutting machine, the combination with a dished bed, of a support movable on said bed, means for oscillating the support, a cutter mounted on the support and embodying a substantially annular cutting portion which is movable through the blank lengthwise of the tooth, means for rotating the cutter, a pivotally mounted frame, a blank carrier arranged on the frame, gearing for rotating the blank carrier, and means for oscillating the frame about its axis.

2. In a gear cutting machine, the combination with a dished bed, of a support movable on said bed, means for oscillating the support, a cutter mounted on the support embodying a substantially annular cutting portion which is movable through the blank lengthwise of the tooth, means for rotating the cutter, a pivotally mounted frame, a blank carrier arranged on the frame and angularly adjustable thereon for changing the position of the blank carrier relatively to the cutter, gearing for rotating the blank carrier alternately in opposite directions, and means for oscillating the frame about its axis.

3. In a gear cutting machine, the combination with a dished bed, of a support movable on said bed, means for oscillating the support, a cutter mounted on the support and embodying a cutting portion which is movable through the blank in a curvilinear path lengthwise of the tooth, means for operating the cutter, a pivotally mounted frame, a blank carrier arranged on the frame, gearing for rotating the blank carrier alternately in opposite directions and means for oscillating the frame about its axis.

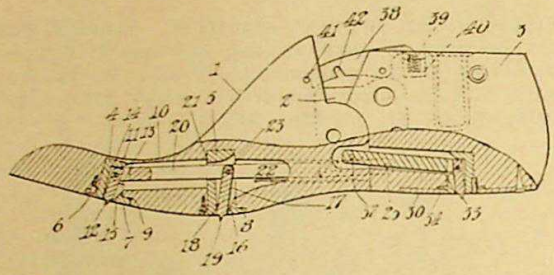
4. In a gear cutting machine, the combination with a dished bed, of a support movable on said bed, means for oscillating the support, a cutter mounted in the support and embodying a cutting portion which is movable through the blank in a curvilinear path lengthwise of the tooth, means for operating the cutter, a pivotally mounted frame, a blank carrier arranged on the frame and adjustable thereon for changing the position of the blank carrier relatively to the cutter, gearing for rotating the blank carrier alternately in opposite directions, and means for oscillating the frame about its axis.

5. In a gear cutting machine, the combination with a dished bed, of a support movable on the bed, a cutter mounted on the support, means for actuating the support,

means for operating the cutter, a pivotally mounted frame, a blank carrier arranged on the frame, means for rotating the blank carrier to generate the profile of a tooth, and means for oscillating the frame.

[Claims 6 to 30 not printed in the Gazette.]

1,203,609. LAST. WILLIAM GORDON, Duxbury, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 12, 1912. Serial No. 670,875. (Cl. 12—141.)



1. A last, having, in combination, a forepart and a heelpart relatively movable to extend and collapse the last, sole retaining means comprising prongs arranged to be forced into the sole, and means for operating said retaining means through the relative movement of the fort part and heel part.

2. A last, having, in combination, a forepart and a heelpart relatively movable to extend and collapse the last, sole retaining means comprising prongs arranged to be forced into the sole, and means for operating said retaining means through the relative movement of the fore part and heel part, so constructed and arranged that said retaining means is held against movement while said last is in one of its extreme positions.

3. A last, having, in combination, a forepart and a heelpart relatively movable to extend and collapse the last, sole retaining means comprising prongs arranged to be forced into the sole, means for operating said retaining means through the relative movement of the fore part and heel part, and means for locking the last in collapsed position.

4. A last, having, in combination, a forepart and a heelpart relatively movable to extend and collapse the last, sole retaining means comprising prongs arranged to be forced into the sole, means for operating said retaining means through the relative movement of the fore part and the heelpart, and means for locking the last in either its extended or collapsed position.

5. A last, having, in combination, a forepart and a heelpart relatively movable to extend and collapse the last, sole retaining means comprising prongs, and means for operating said retaining means through the relative movement of the fore part and heel part to project the prongs when the last is extended, and retract the prongs within the last when the last is collapsed.

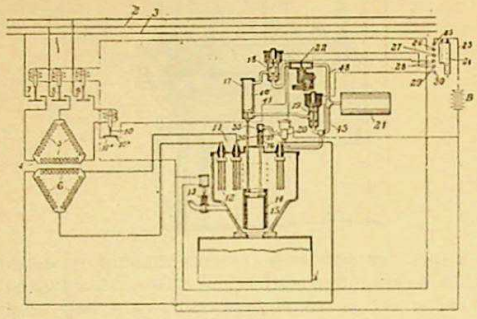
[Claims 6 to 20 not printed in the Gazette.]

1,203,610. CONTROL SYSTEM AND APPARATUS. ARTHUR J. HALL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1914. Serial No. 829,576. (Cl. 219—57.)

1. The combination with a movable member and a fluid-operated device for actuating said movable member, and means for admitting operating fluid to both ends of said device, of means for reducing the pressure of the operating fluid admitted to one end thereof.

2. The combination with a movable member, and a fluid-operated device for actuating said movable member, of means for admitting operating fluid at different pressures to the respective ends of said device.

3. The combination with a movable member and a fluid-operated device for actuating said movable member, and a source of operating fluid, of valves for governing the admission of operating fluid to the respective ends of said device, and means associated with the source of fluid for reducing the pressure of the fluid admitted to one end of said device.

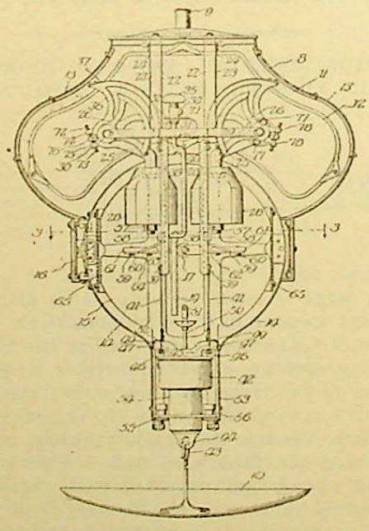


4. A fluid-operated device comprising a movable member adapted to be actuated in opposite directions, a receptacle in which said member is disposed, a source of operating fluid, and means for admitting operating fluid at different pressures to the respective ends of said device.

5. A fluid-operated device comprising a vertically disposed operating cylinder, a movable piston disposed therein, and means for admitting operating fluid at a lower pressure to the upper end of said cylinder than to the lower end thereof.

[Claims 6 to 15 not printed in the Gazette.]

1,203,611. SCALE. CLARENCE H. HAPGOOD, Toledo, Ohio, assignor, by mesne assignments, to The Toledo Scale Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 29, 1911. Serial No. 668,404. (Cl. 73—104.)



1. In a scale, a commodity receptacle, a counterbalancing means for the receptacle and the commodity contained therein comprising a pendulum, a segment connected to the pendulum for oscillation therewith, a support, a strap secured to said support and to the lower end of said segment, a second segment whose arc is eccentric to that of the former said segment connected thereto and to the pendulum for movement therewith, a strap connected at one end to the upper end of the arc of the second said segment and at its other end to the commodity receptacle and adapted to lie upon the periphery of the second said segment.

2. In a scale, a commodity receptacle, counterbalancing means for the receptacle and commodity contained therein comprising a pendulum, a circular segment connected

to the pendulum for oscillation therewith, a substantially vertical support with which the segment has rolling engagement, a second segment having an eccentric arc connected to the pendulum and former said segment for movement therewith, a vertically movable element with which the second said segment engages at its periphery and by which the latter is operated and connections between the vertically movable element and the commodity receptacle.

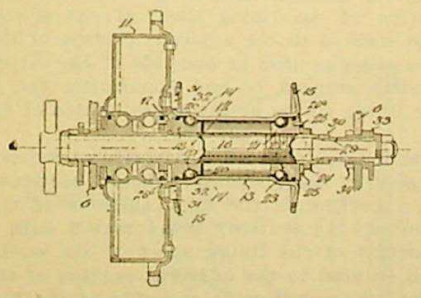
3. In a scale, a commodity receptacle, counterbalancing means for the receptacle and commodity contained therein comprising a pendulum, a circular segment connected to the pendulum for oscillation therewith, a support, a strap engaging the arc of said segment at its lower end and the support at its upper end, a second segment having an eccentric arc connected to the pendulum and former said segment for movement therewith, a vertically movable element with which the second segment engages at its periphery and by which it is operated, and connections between the vertically movable element and commodity receiver.

4. In a scale, a commodity receptacle, counterbalancing means for the receptacle and commodity contained therein comprising a pendulum, a circular segment connected to the pendulum for oscillation therewith, a support, a strap connected at its lower end to the segment and at its upper end to the support, a second segment having an eccentric arc and connected to the pendulum and former said segment for movement therewith, a strap connected at its upper end to the upper end of the arc of the latter segment and at its lower end provided with connections to the commodity receptacle.

5. In a scale, a commodity receptacle, counterbalancing means for the receptacle and commodity contained therein comprising a pendulum, a segment connected to the pendulum for oscillation therewith, a substantially vertical support with which the segment has rolling engagement, a second segment having an eccentric arc and connected to the pendulum and former said segment for movement therewith, means for adjusting the second said segment angularly with respect to the pendulum, a vertically movable element with which the second segment engages at its periphery and by which the latter is operated, and connections between the movable element and the commodity receiver.

[Claims 6 to 26 not printed in the Gazette.]

1,203,612. INTERCHANGEABLE WHEEL-HUB. WILLIAM S. HARLEY, Milwaukee, Wis., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Filed Jan. 17, 1916. Serial No. 72,436. (Cl. 208—45.)

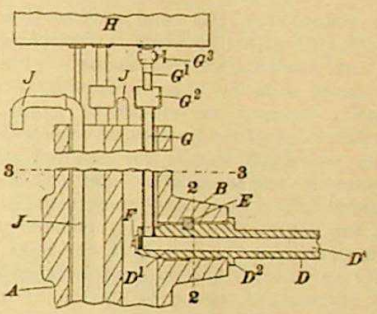


1. In a motorcycle and side car structure including front and rear motorcycle axles and a side car axle, a wheel hub normally adapted to be operatively disposed on the side car axle, means including spacer members for adapting the hub to be operatively disposed on the rear motorcycle axle, and means including spacer members for adapting the hub to be operatively disposed on the front motorcycle axle.

2. In a motorcycle and side car structure including a side car axle and a front motorcycle axle of lesser diameter than the first axle, the combination of a hub adapted to be operatively disposed on the side car axle and means for adapting the hub for operative connection with the front axle including sleeve members engageable on the end portions of the front motorcycle axle and adapted to fit in the ends of the hub bore, and annular abutment ribs carried by the sleeves.

3. In a motorcycle and side car structure including a side car axle, and a rear motorcycle axle of relatively greater length, and carried by fork members, the combination of a hub member adapted to interchangeably engage on the said axles, means for holding the hub spaced from one end of the axle and means for securing the adjacent fork member with respect to the said spacing means.

1,203,613. ORE-ROASTING FURNACE. JOHN HARRIS, Sheffield, England. Filed July 30, 1914. Serial No. 854,143. (Cl. 257—119.)



1. In an ore roasting furnace, the combination of a hollow shaft having an outwardly projecting hollow lug, provided with a transverse passage that intersects the bore of the lug, a rabble arm having a base approximately fitting the interior of the lug, and a locking pin arranged within the transverse passage in the lug and engaging the arm to secure it to the shaft, the pin being shorter than the passage whereby it is entirely within the lug when in operative position.

2. In an ore roasting furnace, the combination of a hollow shaft having an outwardly projecting hollow lug, provided with a transverse passage that intersects the bore of the lug, a rabble arm having a base approximately fitting the interior of the lug, a locking pin arranged within the transverse passage in the lug and engaging the arm to secure it to the shaft, the pin being shorter than the passage whereby it is entirely within the lug when in operative position, and a suitable refractory filling within the ends of said passage.

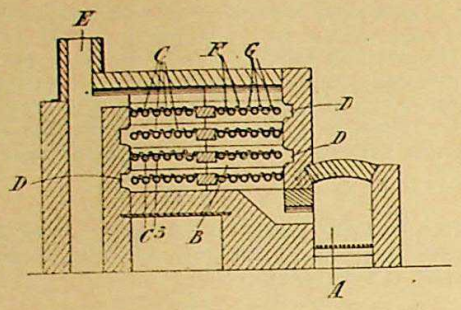
3. In an ore roasting furnace, the combination of a hollow shaft having an outwardly projecting hollow lug provided with a transverse passage that intersects the bore of the lug, a rabble arm having a base approximately fitting the interior of the lug, and a locking pin arranged within the transverse passage in the lug and engaging the arm to secure it to the shaft, the relative position and shape of the passage and form of the pin being such that the resistance to movement of the arm offered by ore being treated acts to increase the locking action of the pin on the arm.

4. In an ore roasting furnace, the combination of a hollow shaft, a hollow arm detachably connected with the shaft, and means for circulating cooling fluid through the arm including a supply pipe connected at one end with the arm, and comprising a plurality of sections, the section connected with the arm being adapted to be detached from the arm independent of any manipulation of any other section.

5. In an ore roasting furnace, the combination of a hollow shaft, a plurality of hollow arms supported by the shaft, an upwardly extending pipe connected with each arm and terminating above the upper end of the shaft, and means for supplying cooling fluid to each of said pipes and permitting any one thereof to be disconnected from the attached arm independent of any adjustment of the others or the fluid supplying means.

[Claims 6 and 7 not printed in the Gazette.]

1,203,614. EVAPORATOR. JOHN HARRIS, Sheffield, England, and DAVID HIBBERT THOMAS, Morriston, Wales. Filed Nov. 29, 1915. Serial No. 64,074. (Cl. 127—9.)



1. In an evaporator, the combination of a flue, a plurality of series of pipe-like evaporating vessels extending across the flue, each series comprising a plurality of said vessels arranged side by side to constitute a baffle preventing direct upward movement of gases in the flue throughout the area of said series of vessels, means at one side of each series of vessels for conducting gases from the space below to the space above said vessels, said means being arranged alternately at opposite sides of the flue, and means for conducting liquor from each vessel in one series to the corresponding vessel in the next lower series, substantially as and for the purpose set forth.

2. In an evaporator, the combination of a flue, a plurality of series of pipe-like evaporating vessels extending across the flue, each series comprising a plurality of said vessels arranged side by side, packing closing all of the spaces between the vessels in each series whereby each series of said vessels forms a baffle preventing direct vertical movement of the heating means through any part of the area of said series, means at one side of each series of vessels for conducting gases from the space below to the space above said vessels, said means being arranged alternately at opposite sides of the flue, and means for conducting liquor from each vessel in the upper series to a corresponding vessel in a lower series, substantially as and for the purpose set forth.

3. In an evaporator the combination of a flue, means for passing hot gases therethrough, pipe-like evaporating vessels extending across the flue, through its walls and disposed side by side in a plurality of rows to form preferably horizontal baffles for the flue gases, holes in the flue walls between adjacent vessels to enable asbestos rope packing to be applied between the vessels and means for causing liquor to flow from each vessel in one baffle row to a corresponding vessel in the row below, substantially as set forth.

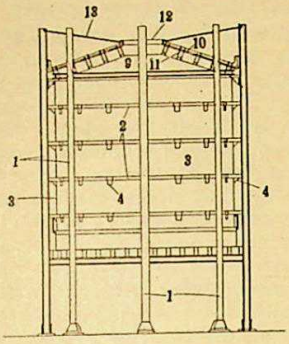
4. In an evaporator a pipe vessel having a weir adjacent to one end limiting the height of liquor in the vessel and an exit in the weir end of the vessel having a larger opening than that above the weir and situated below the top level of the weir, substantially as set forth.

5. In an evaporator a pipe vessel having a weir adjacent to one end limiting the height of liquor in the vessel, an exit in the weir end of the vessel having a larger opening than that above the weir and situated below the top level of the weir, and a sloping lower side to the exit extending from the bottom thereof within the vessel to a line above its floor but below the top level of the weir substantially as set forth.

1,203,615. SULFURIC-ACID CHAMBER. JOHN HARRIS, Sheffield, England, and DAVID HIBBERT THOMAS, Morriston, Wales. Filed Mar. 27, 1916. Serial No. 86,999. (Cl. 23—1.)

1. In a structure for supporting a sulfuric acid chamber the combination with pillars around the chamber, of a central member above the chamber roof supported from the said pillars by radial bars, substantially as set forth.

2. In a structure for supporting a sulfuric acid chamber the combination with pillars around the chamber, of a central member above the chamber roof supported from the said pillars by radial tension bars, substantially as set forth.



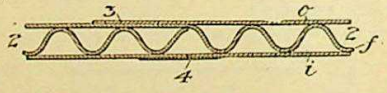
3. In a structure for supporting a sulfuric acid chamber the combination with pillars around the chamber, of a central member above the chamber roof supported from the said pillars by radial compression bars, substantially as set forth.

4. In a structure for supporting a sulfuric acid chamber the combination with pillars around the chamber, of a central member above the chamber roof supported from the said pillars by radial bars some of which are in tension and some in compression substantially as set forth.

5. In a structure for supporting a sulfuric acid chamber the combination with pillars around the chamber, of a central member above the chamber roof supported from the said pillars by radial bars some of which are in tension and some in compression and a flue passing through the central body, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,203,616. JOINT FOR CORRUGATED PAPER-BOARD. EDGAR M. HAWKINS, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 22, 1916. Serial No. 73,522. (Cl. 93—36.)



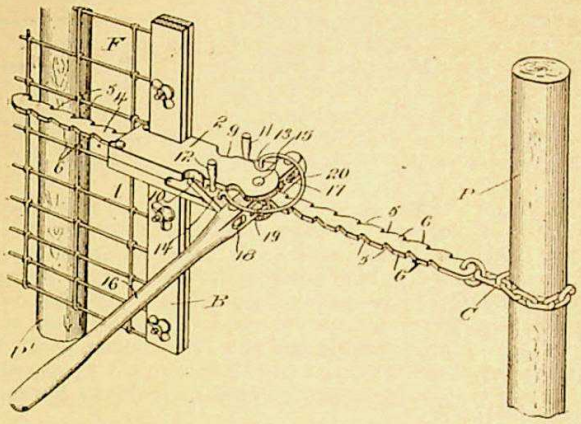
1. A joint for double-faced corrugated paperboard, comprising a pair of complementary board sections one of which has a portion of the filler and one of the lining sheets removed, the sections being mated with the unremoved portion of the lining sheet of one section overlapping and secured to the adjacent portion of the lining sheet of the other section at one side of the latter, and a fastening strip secured to and connecting the adjacent ends of the lining sheets at the opposite side of the board sections.

2. A joint for double-faced corrugated paperboard, comprising a pair of complementary board sections one of which has a portion of the filler and one of the lining sheets removed, the sections being mated with the unremoved portion of the lining sheet of one section overlapping and secured to the adjacent portion of the lining sheet of the other section at one side of the latter and with the adjacent ends of the lining sheets at the opposite side of the sections meeting in a butt-joint, and a fastening strip secured to and connecting the adjacent ends of the lining sheets at said butt-joint.

3. A joint for double-faced corrugated paperboard, comprising a pair of complementary board sections disposed in the same plane and one of which has a portion of the filler and one of the lining sheets removed, the sections being mated with the unremoved portion of the lining sheet of one section overlapping and adhesively secured to the adjacent portion of the lining sheet of the other section at one side of the latter and with the adjacent ends of the lining sheets at the opposite side of the sections

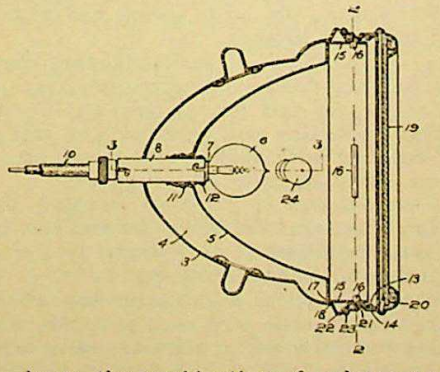
meeting in a butt-joint, and a fastening strip adhesively secured to and connecting the adjacent ends of the lining sheet at said butt-joint.

1,203,617. WIRE-STRETCHING MEANS. THOMAS LAURENCE HARGIS, Woodburn, Ky. Filed Sept. 4, 1914, Serial No. 860,222. Renewed Mar. 31, 1916. Serial No. 88,170. (Cl. 254—72.)



The herein described construction of wire stretchers including a substantially rectangular carriage having a passage through one of its ends and being bifurcated at its opposite end, a rack bar passing through the bifurcated portion and through the passage of the carriage, the teeth of the bar having forwardly inclined faces and straight shoulders, and the shoulders upon one side disposed centrally between the shoulders upon the opposite side of the said bar, one of the faces at the bifurcated end of the carriage having oppositely inclined edges, a lever pivotally secured to the bifurcated end of the carriage, said lever having an opening through which the rack bar passes, dogs pivotally secured to the lever and disposed to the portions thereof opposite the longitudinal edges of the carriage, said dogs having lateral knobs which normally rest against the opposite inclined faces of one of the sides of the carriage, and a round split spring having lateral ends engaging with the dogs between their pivots and knobs and forcing the working faces of the dogs into contact with the toothed edges of the rack bar.

1,203,618. LAMP. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed Aug. 15, 1913. Serial No. 784,863. (Cl. 240—41.)



1. In a lamp, the combination of a lamp casing provided with inner and outer screw-threads, the groove of one being within the ridge of the other, a reflector provided with a thread engaging said inner thread, and a bezel or door provided with a thread engaging said outer thread.

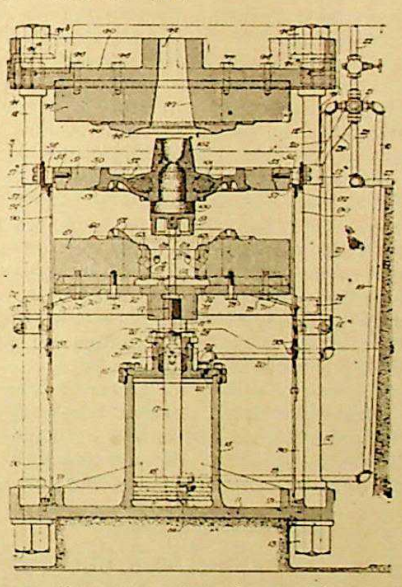
2. In a lamp, the combination of a lamp casing provided with inner and outer screw-threads, a reflector provided with lugs engaging said inner thread, and a bezel or door provided with lugs engaging said outer thread.

3. In a lamp, the combination of a lamp casing provided with inner and outer screw-threads, and having inner and outer shoulders, a reflector engaging said inner shoulder and provided with a thread engaging said inner thread, and a bezel or door engaging said outer shoulder and provided with a thread engaging said outer thread.

4. In a lamp, the combination of a lamp casing the material thereof being distorted into inner and outer screw threads, a reflector provided with a thread engaging said inner thread and a bezel or door provided with a thread engaging said outer thread.

5. In a lamp, the combination of a lamp casing the material thereof being distorted into inner and outer screw threads, a reflector provided with lugs engaging said inner thread and a bezel or door provided with lugs engaging said outer thread.

1,203,619. CASTING APPARATUS. HERBERT H. HEWITT, Buffalo, N. Y. Filed Feb. 13, 1912. Serial No. 677,357. (Cl. 22—92.)



1. In a casting apparatus, the combination of separable mold-sections, an intermediate chiller movable toward one of the mold-sections, and means for shifting one of said mold-sections and said chiller simultaneously in the same direction and separating the same to open and close the mold.

2. In a casting apparatus, the combination of separable mold sections, a chilling ring interposed between said mold sections, and means for opening and closing the mold and for separating said chilling ring from both of said mold sections when the mold is open, to thereby permit the lateral movement of said chilling ring from between the mold sections.

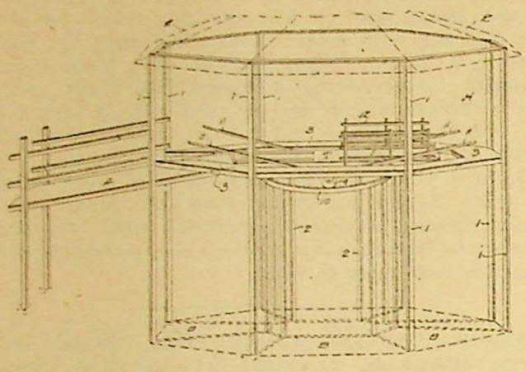
3. In a casting apparatus, the combination of separable mold-sections, means for closing the mold, a chilling ring located between said mold-sections, said chilling ring being free to move laterally from between said mold-sections when the latter are separated and means for supporting said chilling ring during its lateral movement.

4. In a casting apparatus, the combination of separable mold-sections, means for closing the mold, a laterally movable chiller located between said mold-sections and provided with projections or trunnions and rails or supports arranged at the sides of said chiller and whereon the chiller is sustained as it is moved away from the mold-sections.

5. In a casting apparatus, the combination of separable mold-sections, means for closing the mold, a laterally movable chiller located between the mold-sections and provided at opposite sides with anti-friction rollers, and rails whereon said anti-friction rollers will travel as the chiller is moved away from the mold-sections.

[Claims 6 to 21 not printed in the Gazette.]

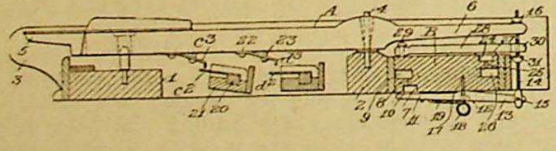
1,203,620. UNLOADING APPARATUS. ANDREW J. HOLT, Maryville, Mo. Filed June 26, 1915. Serial No. 36,517. (Cl. 214—11.)



1. In an unloading apparatus, the combination of a housing comprising a framework including an outer circular series of supporting members, an inner circular series of supporting members so arranged with respect to the outer series of supporting members as to form the framework of a circular group of storage compartments, a circular trackway mounted on said inner supporting members, and a vehicle supporting turntable device mounted on said circular trackway within the housing and concentric to said compartments.

2. In an unloading apparatus, the combination of a housing comprising a framework including an outer circular series of supporting members, an inner circular series of supporting members so arranged with respect to the outer-series of supporting members as to form the framework of a circular group of storage compartments, an inclined vehicle runway extending into the housing, a manway supported by said outer series of supports over said storage compartments, a circular trackway mounted on said inner supporting members, and a vehicle supporting turntable device mounted on said trackway concentric to said compartments, and having load-dumping means.

1,203,621. KEY MECHANISM FOR ORGANS. ROBERT HOPE-JONES, North Tonawanda, N. Y., assignor to Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Sept. 12, 1910. Serial No. 581,622. (Cl. 84—16.)



1. The combination with a pivoted key, of a chambered member located at one side thereof having valve seats on its opposite faces and provided with passages leading therefrom in which a partial vacuum is maintained, separate valve heads coöperating with said valve seats, pivoted levers each connected with said valve heads, a tension rod connecting one of said levers with said key and extending past the other lever and a shoulder on the rod adapted to operate the last mentioned lever after the first lever has been moved.

2. The combination with a pivoted key, of a chambered member arranged beneath it from which air is exhausted, provided with a valve seat, a valve head coöperating with the latter, a lever pivoted exteriorly beneath the chamber having one end connected to the valve head and its other extremity projecting beyond the side of said chamber and a tension rod connecting the said end of the lever to the key.

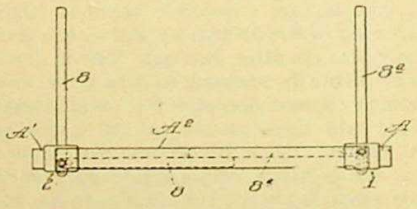
3. The combination with a pivoted key for musical instruments, of two restraining mechanisms adapted to counterbalance different predetermined touch-pressures on the key, a connecting member arranged between the key and the mechanism counteracting the lighter touch-pressure and a shoulder on said member coöperating with the other heavier-touch-pressure mechanism during the operative movement of the key and after the restraint of the first mentioned mechanism has been overcome.

4. The combination with a movable key for musical instruments, a chambered member at one side of the key, from which air is exhausted, having two valve seats, and valve heads coöperating with the seats, of separate levers pivoted on the chambered member and connected to said heads for moving them away from their seats, each lever having a free end projecting beyond the edge of the chambered member and a rod connecting the free end of one of said levers to the key for actuating it upon the commencement of the movement of the key and a shoulder on said rod coöperating with the free end of the other lever at a pre-determined point in the movement of the key.

5. The combination with a key for musical instruments, a pivotal support therefor arranged intermediate its length and a chambered member from which the air is exhausted having two valve seats opening in opposite directions, of valve heads coöperating with the seats, levers for operating said heads away from their seats each having an operating end and a rod fastening the key to one lever and having a shoulder adapted to coöperate with the other lever at an intermediate point in the movement of the key.

[Claim 6 not printed in the Gazette.]

1,203,622. FOLDING STANDARD FOR VEHICLES. ESTIL J. HUFFMAN, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Apr. 7, 1916. Serial No. 89,522. (Cl. 21—54.)



1. The combination of a vehicle standard support adapted to be attached to a vehicle, said support having an opening therein, a slot communicating with said opening, a retaining slot in a wall of said opening, and an open diagonal slot intersecting said retaining slot, a standard, and a pin carried by said standard, said pin coacting with said slots to hold said standard within said opening or said communicating slot or to release and withdraw said standard from said support.

2. The combination of a vehicle standard having a pin near one end, and fixed parts surrounding said standard, a retaining slot for said pin, an open slot in one of said fixed parts intersecting said retaining slot, said intersecting slot coacting with said pin to insert into or withdraw from said fixed parts said standard.

3. The combination of a vehicle standard, fixed parts surrounding said standard, and a pin and slot connection coacting with said fixed parts to insert into or withdraw from said fixed parts said standard.

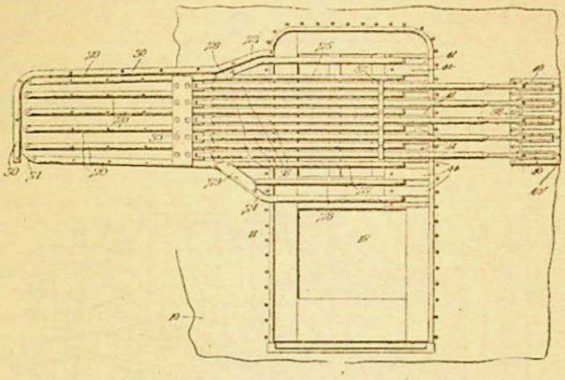
4. The combination of a standard support adapted to be attached to a vehicle, said support having a rectangular opening therein, a slot at right angles to said opening and communicating with the same, and a straight retaining slot in a wall of said opening, a standard, and a pin near one end of said standard adapted to be engaged by said retaining slot, said standard being adapted to occupy said opening when in an upright position and said communicating slot when in a horizontal position.

5. The combination of a support adapted to be attached to a vehicle, said support having an opening therein, a slot communicating with the opening and a straight retaining slot in a wall of said opening, a standard, and a

pin near one end of said standard adapted to be engaged by said retaining slot, said standard being adapted to occupy said opening and said communicating slot.

[Claims 6 to 8 not printed in the Gazette.]

1,203,623. RAILWAY MAIL-EXCHANGE APPARATUS. ALBERT HUPP, Washington, D. C. Filed Feb. 25, 1915. Serial No. 10,532. (Cl. 258—20.)



1. In apparatus of the class described, the combination with a railway car having a side doorway, of a vertical shaft rotatably supported on the interior of the car, brackets secured on said shaft, substantially horizontally arranged spaced bars secured to said brackets and normally projecting through said doorway, means securing the outer ends of said bars together so as to form a mail-receiving chute, and a sliding door, for said doorway, having slots to receive said bars.

2. In apparatus of the class described, the combination with a railway car having a side doorway, of a vertical shaft rotatably supported on the interior of the car, brackets secured on said shaft, substantially horizontally arranged spaced bars secured to said brackets and projecting through said doorway, means securing the outer ends of said bars together so as to form a mail-receiving chute, and a sliding door, for said doorway, having horizontally projecting tongues adapted to enter the spaces between said bars and coöperate with said brackets to close the opening between the rear of said bars and the side of said doorway.

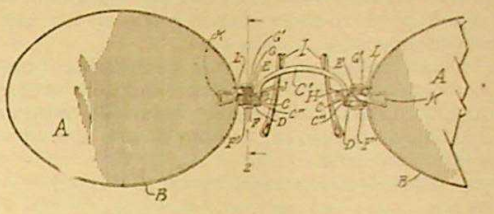
3. In apparatus of the class described, the combination with a car having a side doorway, of a vertical shaft rotatably supported on the interior of the car, a plurality of substantially horizontal bars secured to said shaft and normally projecting through said doorway, said bars having their outer ends secured together to form a mail-receiving chute and their inner ends bent downward.

4. In apparatus of the class described, the combination with a car having a side doorway, of a vertical shaft rotatably supported on the interior of the car, a mail receiving chute secured on said shaft and projecting through said doorway, and a bracing member pivoted to said chute and having a sliding connection with the side of the car.

1,203,624. EYEGLASS-FRAME. CARL F. INGOLD, Milwaukee, Wis., assignor to Milwaukee Optical Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 17, 1916. Serial No. 91,515. (Cl. 88—50.)

1. The combination with a lens strap, of a set of clamping lugs, each secured to one end of said strap, a spring actuated nose guard mounted upon one of the lugs and means for clamping the lugs together independently of the nose guard mounting.

2. The combination with a lens engaging strap provided at its respective ends with clamping lugs, a nose bridge permanently connected with one of said lugs, a spring actuated nose guard mounted upon one side of the lugs, a projection on the opposite side of said lug, the other lug being socketed to receive said projection, and a clamping screw adapted to enter said projection and arranged to bind said lugs together.

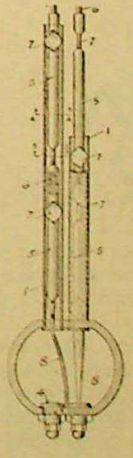


3. The combination with a lens engaging strap provided at its respective ends with clamping lugs, a nose bridge permanently connected with one of said lugs, a spring actuated nose guard mounted upon one side of the lugs, a projection on the opposite side of said lug, the other lug being socketed to receive said projection and a clamping screw adapted to enter said projection and arranged to bind said lugs together, said lugs being formed to interlock with each other at one side of said projection.

4. An eye-glass frame including the combination with a nose engaging strap, of a pair of clamping lugs, each connected with one end of the strap, a post on one lug socketed in the other, a clamping screw connected with said post and adapted to bind the lugs together and an interlocking member on one of the lugs, socketed in the opposing lug adjacent to said post and adapted to prevent pivotal oscillation of the lugs upon said post.

5. The combination with a lens engaging band or strap, of a pair of lenses each secured to one end of the strap, a post extending through one of the lugs and removably socketed in the other lug, a clamping screw adapted to engage one end of said post to bind said lugs together, a nose guard mounted on the other end of said post, a removable post cap, and a spring interposed between the said cap and a portion of the nose guard, said spring having one end connected with the nose guard and the other end projected into engagement with the lens strap, said parts being organized to permit independent separation of the clamping lugs or of the nose guard and spring substantially as described.

1,203,625. STEAM-BOILER SUPERHEATER. DAVID S. JACOBUS, Jersey City, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Nov. 2, 1914. Serial No. 869,777. (Cl. 137—112.)



1. A superheater core having a supporting piece adapted to extend through the superheater box or header and to rest at the side of a hand-hole fitting opposite the core.

2. A superheater core having a flexible support adapted to extend through and to be sprung to one side of the opening in the box or header through which the core is introduced.

3. A steam boiler superheater comprising tubes connected to boxes, said boxes having hand-hole fittings, and

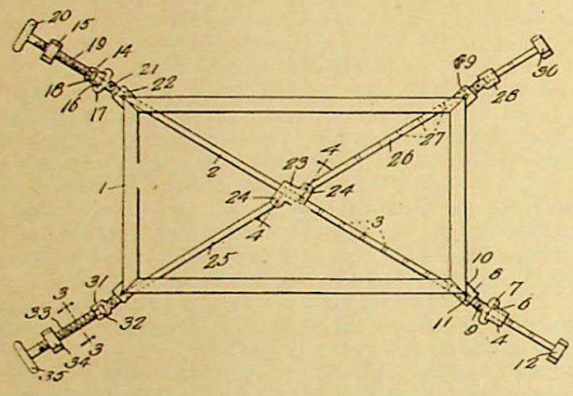
cores in said tubes having supports adapted to rest against the box between the said fittings.

4. A superheater core made up of separable sections and supported by a piece which rests at the side of a hand hole fitting opposite the core.

5. A steam boiler superheater comprising tubes connected to boxes, said boxes having hand hole fittings, and cores in said tubes made up of separable sections and each core having a support resting at the side of the fitting opposite the core.

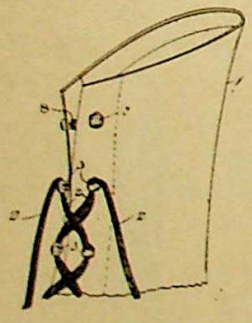
[Claims 6 to 18 not printed in the Gazette.]

1,203,626. PICTURE-FRAME AND DOOR CLAMP. HAROLD P. JOHNSON, Concord, N. H. Filed June 21, 1916. Serial No. 104,962. (Cl. 144—292.)



The combination with a block, of a rod slidable therethrough, legs on the ends of the rod, bars pivoted to the block and extending in angular relation to the rod, legs supporting the ends of the bars, holding members mounted on the rod and bars and means carried by certain of the legs for adjusting said holding members to and away from each other.

1,203,627. SHOE AND GLOVE EYELET. PETER J. JOHNSON, Shelley, Idaho. Filed Feb. 15, 1915. Serial No. 8,320. (Cl. 24—145.)



1. A lacing stud made from a sheet of material, the terminals of said sheet being formed into a tubular sleeve adapted to engage the garment to which the stud is to be attached.

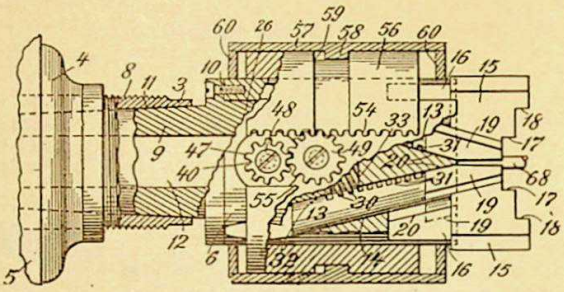
2. A lacing stud made from a sheet of material, the terminals of said sheet being transversely curved and disposed substantially at right angles to the body portion of the sheet, the said terminals being brought together and slitted thereby forming a tubular slitted sleeve adapted to engage the garment to which the stud is to be attached.

3. A lacing stud made from a sheet of material bent upon itself to form a closed loop, the terminals of said sheet being bent at right angles to the body portion and rounded to produce a sleeve when the same are brought together, said terminals being slitted, said sleeve providing means for engaging the garment to which the stud is to be attached.

4. A lacing stud made from a sheet of material, the terminals of said sheet being formed into a tubular sleeve adapted to engage the garment to which the stud is to be attached, said tubular sleeve being provided with a plurality of slits in its free edge for facilitating the engagement of the sleeve with the garment to which the stud is to be attached.

5. A lacing stud made from a sheet of material, the terminals of said sheet being formed into a tubular sleeve adapted to engage the garment to which the stud is to be attached, the material of the sheet intermediate the terminals thereof being formed into a closed loop for receiving the lacing.

1,203,628. DEVICE FOR ADJUSTING THE JAWS OF REVOLVING LATHE-CHUCKS. ABRAHAM KIPNISS, Brooklyn, N. Y. Filed Feb. 2, 1915. Serial No. 5,708. (Cl. 29—128.)



1. A device of the character described comprising a rotating chuck having a series of inclined movable jaws, said chuck having inclined guides in which said jaws are free to move; one end of each of said jaws having radial extensions, and said chuck having radially extending guides in which said radial extensions are free to move; each of said radial extensions being provided with shoulders placed at different distances radially from the center of the chuck, whereby articles of great difference in size may be clutched; and manually operative means for actuating said jaws, whereby they can be moved in a direction adapted to clutch an article, and whereby they can be moved in a direction adapted to release said article.

2. A device of the character described comprising a rotating chuck having a series of inclined movable jaws, one end of each of said jaws having shoulders placed at different distances radially from the center of the chuck, whereby articles of great difference in size may be clutched, each of said jaws having lateral flanges adapted to move in inclined guides formed in said chuck, said chuck also having radially extending guides in which said jaws are free to move; mechanism for actuating said jaws; a manually operative longitudinally reciprocating sleeve forming part of said jaw actuating mechanism; means whereby longitudinal movement of said sleeve in one direction causes movement of said jaws in a direction adapted to clutch an article; and means whereby longitudinal movement of said sleeve in the reverse direction causes movement of said jaws in a direction adapted to release said article.

3. A device of the character described comprising a rotating chuck having a series of inclined movable jaws, one end of each of said jaws having shoulders placed at different distances radially from the center of the chuck, whereby articles of great difference in size may be clutched, each of said jaws having lateral flanges adapted to move in inclined guides formed in said chuck, said chuck also having radially extending guides in which said jaws are free to move; mechanism for actuating said jaws; a manually operative longitudinally reciprocating sleeve forming part of said jaw actuating mechanism; and means whereby longitudinal movement of said sleeve in one direction causes movement of said jaws in a direction adapted to clutch an article.

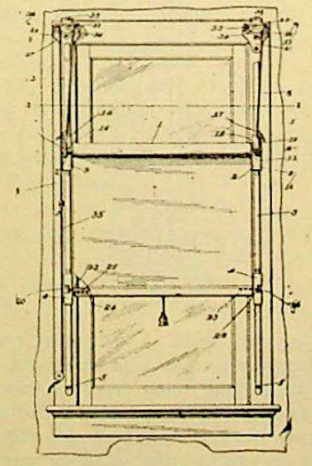
4. A device of the character described comprising a rotating chuck having a series of inclined movable jaws, one end of each of said jaws having shoulders placed at different distances radially from the center of the chuck, whereby articles of great difference in size may be

clutched, each of said jaws having lateral flanges adapted to move in inclined guides formed in said chuck, said chuck also having radially extending guides in which said jaws are free to move; said inclined jaws being provided with screw threads; a rotatable part having screw threads engaging said screw threads on said inclined movable jaws; and manually operative means for actuating said rotatable screw threaded part whereby it may be rotated in a direction adapted for causing movement of said jaws in a direction to clutch an article, and whereby said rotatable screw threaded part may be rotated in a direction adapted for causing movement of said jaws in a direction to release said article.

5. A device of the character described comprising a rotating chuck having a series of inclined jaws, said chuck having correspondingly inclined guides in which said jaws are free to move longitudinally, one end of each one of said jaws having a lateral extension moving in guides formed in the chuck and extending radially from the center thereof, said lateral extension of said inclined jaws having shoulders placed at different distances radially from the center of the chuck, whereby articles of great difference in size may be clutched, and said lateral extension also having lateral flanges adapted to move in inclined guides formed in the chuck and extending parallel to said inclined guides in which said inclined jaws move; and said inclined jaws being provided with screw threads; a rotatable part having screw threads engaging said screw threads on said inclined movable jaws; and manually operative means for actuating said rotatable screw threaded part whereby it may be rotated in a direction adapted for causing movement of said jaws in a direction to clutch an article, and whereby said rotatable screw threaded part may be rotated in a direction adapted for causing movement of said jaws in a direction to release said article.

[Claims 6 to 13 not printed in the Gazette.]

1,203,629. SHADE-CARRIER. FREDERICK H. KNAPP, Westminster, Md. Filed Aug. 3, 1914. Serial No. 854,853. (Cl. 156—27.)



1. A window shade fixture consisting of a roll, carriages therefor, flexible guide rods on which the carriages travel, means for moving the roll and carriages up and down the guide rods and means for supporting the guide rods at short intervals throughout their length, the guide rods being so flexible that they may be rolled or folded, the whole device being thus packed in a small space for shipment.

2. A window shade fixture consisting of a roll, a carriage therefor, flat flexible guide rods on which the carriages travel, means for moving the roll and carriages up and down the guide rods and means for supporting the guide rods at short intervals throughout their length, the guide rods being so flexible that they may be rolled or folded, the whole device being thus packed in a small space for shipment.

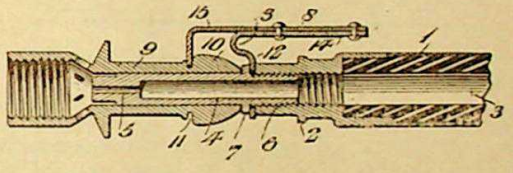
3. In a window shade construction, a roll, flat guide rods, followers engaging the rods, ears for the followers, universal joints connecting the ears to the followers, the ears being slotted and the roll provided with pivots to engage the slots, and means for moving the followers and roll up and down the length of the window, the followers moving over the guide rods.

4. In a window shade construction, a roll, flat guide rods, followers engaging the rods, ears for the followers, the ears being pivotally connected to the followers to swing horizontally relatively thereto and apertured to receive the roll pivots, and means for moving the followers and roll up and down the length of the window, the followers moving over the guide rods.

5. In a window shade construction, a roll, vertical guide rods in the form of flat straps, followers engaging the straps, ears for the followers, universal joints connecting the ears to the followerrs, the ears being slotted and the roll provided with pivots to engage the slots, and means for moving the followers and roll up and down the length of the window, the followers moving over the guide rods.

[Claims 6 to 8 not printed in the Gazette.]

1,203,630. COUPLING DEVICE FOR TUBES. HARRY A. KOENIG, Philadelphia, Pa. Filed Mar. 4, 1916. Serial No. 82,064. (Cl. 137—28.)

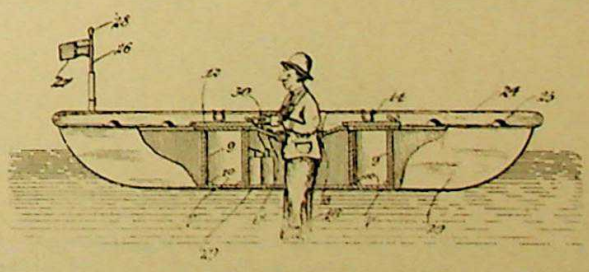


1. In a device of the character stated, a nipple adapted to be secured to a tube, a nozzle having threaded engagement with said nipple and provided with a flange adjacent the threaded portion, a spring clip having means adapted to be clamped between said flange and nipple to hold said clip in operative position, a union-head adapted to receive said nozzle and having a shouldered portion and a jaw part on said clip for engagement with said shouldered part.

2. In a device of the character stated, a body of spring material provided with a supporting part arranged at an angle thereto and having an opening therein, said body part also having an offset to provide spring action and an extension secured to said body having a locking jaw integral therewith.

3. In a device of the character stated, a body of spring material provided with a supporting part, a nipple, means to attach said supporting part to said nipple, a nozzle, a union head for receiving said nozzle provided with a shoulder and an extension on said spring body having a jaw adapted to flex to engage said shoulder, whereby said parts are interlocked.

1,203,631. LIFE-SAVING DEVICE. EDWARD KREID, Detroit, Mich. Filed May 22, 1916. Serial No. 99,070. (Cl. 9—11.)



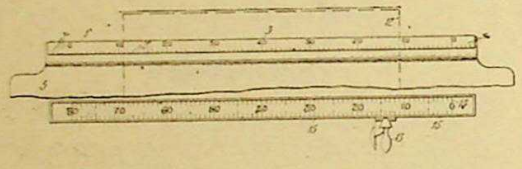
1. A life saving device comprising connected foldable frames having semi-circular portions providing a body well, rings adjacent said semi-circular portions, flexible containers suspended from the rings of said frames, means in said flexible containers adapted to retain said containers

in an extended position, a body container suspended from the semi-circular portions of said frames, a receptacle carried by said frames and adapted to be inflated, and means for closing all of said containers.

2. A life saving device comprising connected frames adapted to fold one upon the other, container rings carried by each frame, flexible containers carried by said rings, lids carried by said rings for said containers, pivoted bars in said flexible containers adapted to retain said containers in extended positions, a body container carried by said frame, and a receptacle supported by said frames and adapted to be inflated to maintain said frames afloat.

3. A life raft comprising a receptacle adapted to be inflated, frames in said receptacle, flexible containers suspended from said frames, lids for said containers, pivoted bars in said containers adapted to retain said containers in extended positions, and a body container centrally of said receptacle.

1,203,632. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 19, 1912. Serial No. 721,122. (Cl. 197—194.)



1. In a typewriting machine, the combination with a paper table having a bead at its upper end, of a scale curved to conform to the shape of said bead, and a clamping device on said scale extensible within the bead to clamp the scale on the bead.

2. As an article of manufacture, a type writer scale semi-cylindrical in cross section and provided with clamping devices on the interior of the scale.

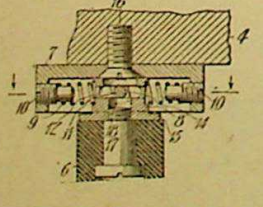
3. As an article of manufacture, a type-writer scale substantially semi-cylindrical in cross section and comprising blocks fixed to the inner surface of the scale, and clamping members threaded into said blocks.

4. In combination with a paper table having a bead at its top edge, a semi-tubular scale conforming with the curvature of said bead, and means located within the semi-tubular scale to clamp the scale to the bead.

5. In combination with a paper table having a bead at its top edge, a semi-tubular scale conforming with the curvature of said bead, and clamping means located substantially wholly within the bead and scale and concealed therein to fasten said scale on said table.

[Claims 6 and 7 not printed in the Gazette.]

1,203,633. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 22, 1912. Serial No. 732,806. (Cl. 155—33.)



1. In a typewriting machine, the combination with the machine frame and feet supporting the weight of the frame, of casings attached to the frame, springs in said casings between each casing and the corresponding foot adapted to absorb lateral shock, and connections between said casings and feet whereby lateral movement of the casings with respect to the feet is permitted.

2. In a typewriting machine, the combination with the machine frame and feet supporting the weight of the frame, of shock absorbers comprising casings attached to said frame and slidable laterally over said feet, and compression springs in said casings between said frame and its supporting feet.

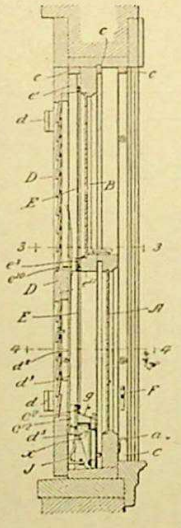
3. In a typewriting machine, the combination with the machine frame and feet carrying the weight of the frame, of shock absorbers comprising casings secured on the frame and slidable laterally over the feet, compression springs between said casings and feet, and means to adjust the tension on said springs.

4. In a typewriting machine, the combination with a main frame and feet of elastic material to support the machine, of casings fixed to the main frame, blocks secured to said feet, bearings between said blocks and casings permitting movement of the frame relative to said blocks in the direction of the carriage travel and shock reducing springs between the casings and feet.

5. In a typewriting machine, the combination with a machine frame and feet supporting the weight of the machine, of shock absorbers comprising blocks fixed to said feet, casings fixed to the main frame and slidable over said blocks, said blocks and casings provided with slots, roller bearings extending through said slots for permitting lateral movement of the frame on said blocks, and springs opposing said lateral movement.

[Claims 6 to 13 not printed in the Gazette.]

1,203,634. WINDOW-SCREEN. BENJAMIN F. LAUDENSCHLAGER and JOHN S. FREDERICK, Emaus, Pa. Filed Aug. 3, 1916. Serial No. 112,993. (Cl. 156—14.)



1. The combination with a window frame, provided with upper and lower sashes and shutters, of shutter-operating devices connected with the shutters and with the sill of the window frame, a screen mounted outside the plane of the upper or outer sash, and a lid hinged to the lower end of the screen having an inner portion above the shutter operating device provided with a front arranged directly below the plane of the upper sash close to the lower or inner sash and between said inner sash and the shutter operating devices.

2. The combination with a window frame, provided with upper and lower sashes and shutters, of shutter-operating devices connected with the shutters and with the sill of the window frame, a screen mounted outside the plane of the upper or outer sash, and a box-like lid above the shutter operating devices hinged to the screen and having a front portion disposed directly below the upper sash and close to the lower or inner sash and between said inner sash and the shutter operating devices.

3. The combination with the window frame, provided with upper and lower sashes and shutters, of shutter-operating devices connected with the shutters and with

the sill of the window frame, a screen frame mounted outside the plane of the upper or outer sash and provided on its inner side with wire netting, and a box-like lid arranged over the connection of the shutter-operating devices with the sill, hinged to the lower end of the screen frame and having an inner front portion arranged directly below the upper sash and close to the lower or inner sash.

4. The combination with a window frame, provided with upper and lower sashes and shutters, of a screen located outside the sashes and inside the shutters and having a recessed cross-piece, a lid hinged to the inside of the lower end of the screen frame and having a front portion located in a plane directly below the upper sash and slot-operating devices extending through the recessed cross-piece and having handles projecting into the lid portion of the screen.

5. The combination with a window frame, provided with upper and lower sashes and shutters, of a screen located outside the sashes and inside the shutters hinged to the window frame to swing about a vertical axis, and a box-like lid hinged to the screen and having a front portion disposed directly below the upper sash and close to the lower or inner sash, said lid having one of its ends inclined to provide clearance when the screen is swung on its hinges.

[Claims 6 and 7 not printed in the Gazette.]

1,203,635. SUPPORT FOR METALLIC GLOW-FILAMENTS. ANTON LEDERER, Atzgersdorf, near Vienna, Austria-Hungary. Filed Sept. 18, 1906. Serial No. 335,152. (Cl. 176—39.)

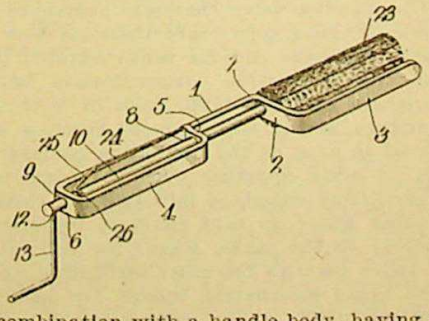
1. In a metal filament incandescent lamp, a support for the metallic filament consisting of a metal wire, coated with an oxygen compound of the metal of the said wire, which coating does not extend beyond the end of the support and is thus interposed between the filament and the said metal wire.

2. In an electric lamp, the combination of a metallic filament and a support for the said filament consisting of a nickel wire, coated with oxid of nickel; said covering being thus interposed between the said filament and the nickel wire.

3. As a support for incandescent metal, a wire of high refractability consisting of a nickel wire coated with an oxid of nickel.

4. A shield for the support of an incandescent metal body, consisting of a coating of an oxid of the metal out of which said support is made, the said coating being thus interposed between the incandescent metal body and the metal of the support.

1,203,636. ROTARY TOOTH-BRUSH. ISIDORE LOUIS, Kansas City, Mo. Filed July 19, 1915. Serial No. 40,613. (Cl. 15—37.)

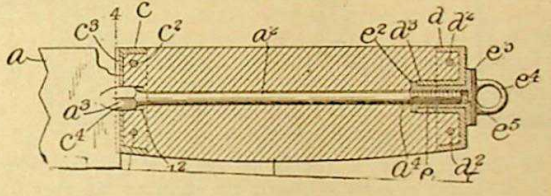


1. The combination with a handle body, having a shoulder at one end provided with a guard extension, having its opposite end turned laterally and extended back along the body, the free end of said body being turned inwardly and apertured to form a bearing, the shoulder and transversely turned part of the body having apertures in alinement with the first named aperture, a shaft rotatably mounted in said apertures, a brush on said shaft lying along the guard extension and a crank member at the opposite end of the shaft for the purpose set forth.

2. The combination of a handle body, having a shoulder at one end provided with a guard extension and having its opposite end bent back to form a bearing and handle grip, the end of the backturned part being turned toward and secured to the handle body, a shaft rotatably mounted in the shoulder and in the bearing portions of the handle, a crank member on said shaft, and a brush on said shaft lying along the guard extension.

3. The combination with a handle member comprising a bar having a portion extended at right angles to the body to form a shoulder of the body and then extended parallel with said body to form a guard, the said handle having a backturned portion at the end opposite the guard, the backturned portion and the shoulder member of the handle having apertures, forming bearings, a shaft rotatable in said bearings, a brush mounted on the shaft and lying along the guard, and a crank on said shaft.

1,203,637. BUTCHER'S KNIFE. WILLIAM F. LUTZ, Brooklyn, N. Y. Filed Sept. 7, 1915. Serial No. 49,198. (Cl. 30—9.)



1. A knife of the class specified, comprising a handle and detachable blade, said handle being provided at each end with a cap, the cap at the outer end of the handle being provided with a rotatable bushing having an internal thread and the cap at the blade end of the handle being provided with a central aperture which is angular in form and which communicates with a corresponding recess in the said end of the handle, and the blade being provided with a shank which passes through said aperture and through the handle, the free end of which is threaded to correspond with the thread of said bushing, said shank being provided adjacent to the blade with a head which is angular in cross section, and adapted to fit in said aperture and the cap at the blade end of the handle being also provided with a central transverse recess to receive the corresponding end of the blade.

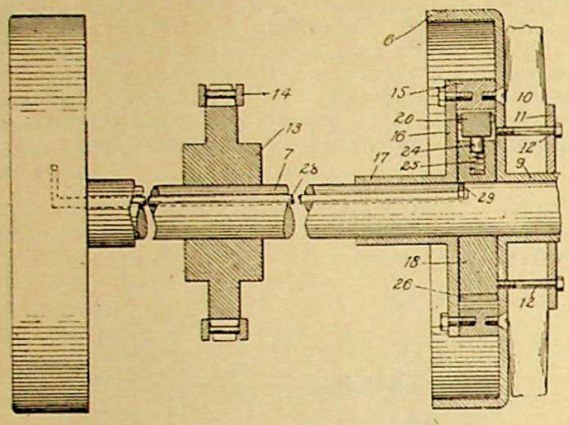
2. A knife of the class described, comprising a handle and a detachable blade, said handle being provided at each end with a cap, the cap at the outer end of the handle being provided with an inwardly directed sleeve in which is a rotatable and non-detachable bushing having an internal thread, said bushing being provided with a finger piece, said blade being provided with a shank which passes through the handle and into said bushing and is threaded to correspond with the thread in said bushing and the cap at the blade end of the handle and the shank of the blade being provided with means to prevent the rotation of said blade whereby said blade may be drawn into position by the rotation of said bushing.

1,203,638. VEHICLE DRIVING MECHANISM. WILLIAM LUXMORE, Chicago, Ill. Filed Nov. 2, 1914. Serial No. 869,806. (Cl. 21—90.)

1. In combination, a rotatable shaft, a pair of wheels loosely mounted upon the shaft, an annular member fixed with respect to each wheel, said annular members provided with internal teeth, a substantially circular block disposed in each annular member and fixed with respect to the shaft, a plurality of recesses formed in the periphery of each of said blocks, a dog disposed in each of said recesses and provided with teeth arranged to cooperate with the teeth of its associated annular member, means for connecting the several dogs associated with each block, and devices for connecting said last-mentioned means.

2. In combination, a rotatable shaft, a pair of wheels loosely mounted upon the shaft, an annular member fixed

with respect to each wheel, said annular members provided with internal teeth, a substantially circular block disposed in each annular member and fixed with respect to the shaft, a plurality of recesses formed in the periphery of each of said blocks, a dog disposed in each of said recesses and provided with teeth arranged to coöperate with the teeth of its associated annular member, a ring for connecting the several dogs associated with each block, and means comprising a rocker shaft for connecting said rings.



3. In combination, a rotatable shaft, a pair of wheels loosely mounted upon the shaft, an annular member fixed with respect to each wheel, a substantially circular block disposed in each of said annular members and fixed with respect to the shaft, a plurality of recesses formed in the periphery of each block, a dog disposed in each of said recesses, each of said blocks and its associated dogs provided with coöperating cam surfaces, devices for connecting the several dogs associated with each block, and mechanism for connecting said devices.

4. In combination, a rotatable shaft, a pair of wheels loosely mounted upon the shaft, an annular member fixed with respect to each wheel, a substantially circular block disposed in each of said annular members and fixed with respect to the shaft, a plurality of recesses formed in the periphery of each block, a dog disposed in each of said recesses, each of said blocks and its associated dogs provided with coöperating cam surfaces, a ring for connecting the several dogs associated with each of said blocks, and means comprising a rocker shaft for connecting said rings.

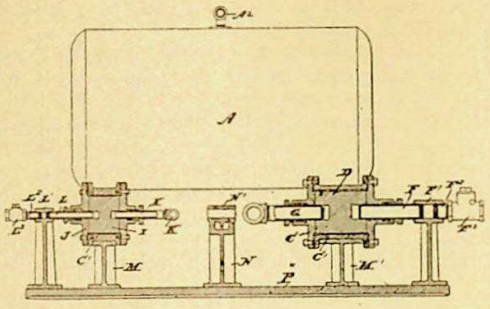
5. In combination, a rotatable shaft, a pair of wheels loosely mounted on said shaft, an annular member fixed with respect to each wheel, a block disposed in each of said annular members and fixed with respect to the shaft, a plurality of recesses formed in the periphery of each block, dogs disposed in said recesses, said dogs arranged to effect connection between their associated block and the annular member, a ring disposed around each block and arranged to embrace the several dogs associated with the block, and means for connecting said rings.

[Claims 6 to 28 not printed in the Gazette.]

1,203,639. STEAM-TRAP. JOSEPH H. MAILHOT, Detroit, Mich. Filed June 26, 1915. Serial No. 36,588. (Cl. 137—101.)

1. In an apparatus of the character described, a base plate, a pair of oscillating valve chambers spaced apart and supported upon the base, a pair of tanks, pipe connection between the oscillating valve chambers and the tanks, each valve chamber having two pair of ports, each pair of ports communicating with one of the pipes leading to the tanks, and a stationary valve housed in each oscillating valve chamber having two pair of ports adapted to co-act with the ports of the respective valve chambers, whereby water and boiler pressure may be delivered alternately to the respective tanks and discharged therefrom.

2. In an apparatus of the character described, a base plate, a pair of oscillating valve chambers spaced apart and supported upon the base, a pair of tanks, pipe connection between the oscillating valve chambers and the tanks, each valve chamber having two pair of ports, each pair of ports communicating with one of the pipes leading to the tanks, means for conveying water to one of the oscillating valve chambers for delivery to the tanks, means for conveying boiler pressure to the other oscillating valve chamber for delivery to the tanks, means for conveying the water discharged from the tanks to the boiler, and means for discharging the boiler pressure from the tanks when released through the operation of one of the oscillating valve chambers.



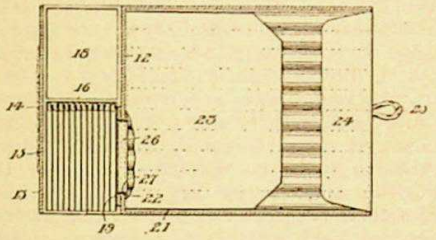
3. In an apparatus of the character described, a base, a pair of oscillating valve chambers spaced apart and supported upon the base, a pair of tanks, pipe connections between the oscillating valve chambers and the respective tanks, each of said oscillating valve chambers provided with two pair of ports, each pair of ports communicating with one of the pipes leading to the tanks, a stationary valve housed within each oscillating valve chamber having two pair of ports adapted to co-act with the ports of its respective oscillating valve chamber to establish communication respectively with the boiler and with a water supply pipe, and between the steam space of the boiler and exhaust pipe, said valves being operably connected with the tanks whereby one of the valves will alternately deliver and discharge water into and from the respective tanks while the other valve admits steam into one tank while exhausting steam from the other tank, a pipe for delivering water to one of the oscillating valve chambers, a check valve to close against the return of said water, means for delivering the water from the respective tanks to the boiler under the control of the oscillating valve chamber, an exhaust pipe for delivering steam from the respective chambers, under control of the other oscillating valve chamber, and a check valve to close against the return of the exhaust, substantially as described.

4. In a device of the character described, a base plate, a pair of oscillating valve chambers supported from the base, a pair of tanks, pipe connections between the oscillating valve chambers and the tanks adapted to support the tanks and to provide communication between the valve chambers and the tank, each of said oscillating valve chambers having two pairs of ports, a stationary valve housed in each of the oscillating chambers, having two pairs of ports co-acting with the ports of the respective oscillating chambers inclosing the valves, means for conveying water to said chamber for alternate delivery thereby to the tanks, means for delivering steam from the boiler through the other oscillating valve chamber to the tanks alternately, means for cushioning the impact of the tilting tanks, comprising a rocking arm supported by the base having ends adapted to alternately receive the tanks, a pair of disconnected fluid chambers spaced apart and pivoted to the base, a plunger adapted to reciprocate in each of the fluid chambers perforated for the passage of the fluid, and connecting rods engaging the plunger and the respective ends of the rocking arm.

5. In an apparatus of the character described, a base plate, a pair of oscillating valve chambers supported from

the base, a pair of tanks, pipe connection between the oscillating valve chambers and the tanks, each valve chamber having two pair of ports, each pair of ports communicating with one of the pipes leading to the tanks, a stationary valve housed in each oscillating valve chamber having two pair of ports adapted to co-act with the ports of the respective valve chambers, whereby water and boiler pressure may be delivered alternately to the respective tanks and discharged therefrom, an adjustable packing ring surrounding each of said ports, having an inwardly projecting flange extending into the stationary valve, and resilient elements to force the ring in contact with the wall of the valve chamber.

1,203,640. COMBINED CIGARETTE AND MATCH BOX. JOHN MALICKI, Amsterdam, N. Y. Filed Aug. 19, 1915. Serial No. 46,359. (Cl. 206—48.)



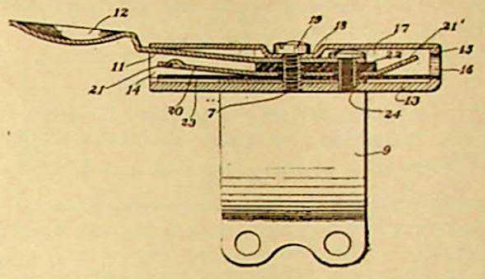
1. A cigarette container comprising a casing having a transverse partition adjacent one end thereof to provide a transverse open-ended compartment, a compartment drawer slidably mounted within said compartment, the said partition adjacent side wall of the drawer having registering openings therein, a cigarette carrier positioned in the opposite end of the casing, and an outstanding tongue carried by the end wall of said carrier adapted to pass through the registering openings in the partition and drawer wall to prevent lateral displacement of the said drawer.

2. A cigarette container comprising an outer casing having a transverse opening therein, a drawer slidably mounted within said opening, a cigarette container slidably mounted within said casing at right angles to the line of movement of the drawer, and coöperative locking means carried by the drawer and container to prevent lateral displacement of the drawer when the container is wholly positioned within the casing.

3. A cigarette container comprising an outer casing having a transverse opening at one end thereof extending therethrough, a drawer slidably mounted in said opening to be removed from either side of said container, a cigarette carrier slidably mounted within the container for movement in a direction at right angles to the sliding movement of the drawer, and interlocking connections between the drawer and cigarette carrier made operative when the drawer and carrier are wholly positioned within the casing.

1,203,641. CIRCUIT-CONTROLLER. RAY H. MANSON, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Sept. 29, 1913. Serial No. 792,256. (Cl. 200—27.)

1. In a device of the class described, the combination of a hollow casing long in proportion to its width and low in proportion to its width, one end of the casing being opened and the other closed by a wall having a hole therein, a contact spring completely concealed and covered by said casing, a strip of insulating material nsulating said spring from the bottom of the casing upon which it is mounted with the terminal end adjacent the opening in the closed end of the casing, a second contact spring mounted in said casing above the first contact spring, a layer of insulating material between said contact springs, said second contact spring having one of its ends extending through the open end of the casing and accessible from the outside of said casing, the outside end of such contact spring being depressed to form a catch for the finger of the operator, the top of the casing being depressed for the head of a screw and a screw passing through the top and bottom walls of the casing, the contact springs and intervening layers of insulating material and having its head seated in the depression in the top.



2. In a device of the class described, the combination of a hollow casing long in proportion to its width and low in proportion to its width, a contact spring completely concealed and covered by said casing, a strip of insulating material insulating said spring from the bottom of the casing upon which it is mounted with the terminal end adjacent one end of the casing, a second contact spring mounted in said casing above the first contact spring and a layer of insulating material between said contact springs, said second contact spring having one of its ends extending through the casing and accessible from the outside of said casing, the outside end of said second contact spring having a catch formed thereon for the finger of the operator.

3. In a device of the class described, the combination of a support, a contact spring mounted on the support, a layer of insulating material between the contact spring and the support, one end of said contact spring being free, a contact on the free end of said spring, a second contact spring, a layer of insulating material between said contact springs, means to connect said contact springs and insulating material to the base, said contact springs, said base and said layer of insulating material being parallel and a catch formed on the free end of the second contact spring and integral therewith.

4. A switch comprising a hollow casing long in proportion to its width and low in proportion to its width, a contact spring completely concealed and covered by said casing, a strip of insulating material insulating said spring from the bottom of the casing upon which it is mounted with the terminal end adjacent one end of the casing, a second contact spring mounted in said casing above the first contact spring and a layer of insulating material between said contact springs, and operating means to actuate said second contact spring including a part extending through and accessible from the outside of said casing and having a catch formed on said part for the finger of the operator.

1,203,642. COLOR-LAKES FAST TO LIGHT. ERNST MECKBACH, Opladen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed May 14, 1915. Serial No. 28,104. (Cl. 8—1.)

1. The new color lakes comprising in combination a basic dye, an anthraquinone coloring matter and aluminum, said lakes being distinguished by their great fastness to light, substantially as described.

2. The new color lakes comprising in combination a basic dye, an aminoanthraquinone sulfonic acid compound and aluminum, said lakes being distinguished by their great fastness to light, substantially as described.

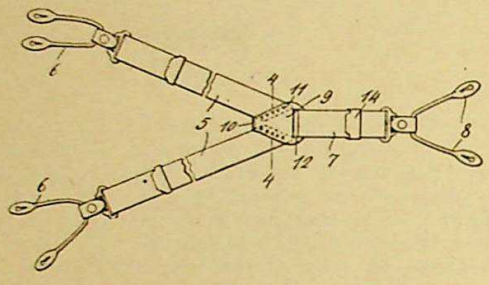
3. The new color lakes comprising in combination an alkylized dehydrothiotoluidin, a polyhydroxyanthraquinone coloring matter and aluminum, said lakes being distinguished by their great fastness to light and purity of color, substantially as described.

4. The new color lakes comprising in combination an alkylized dehydrothiotoluidin, an aminoanthraquinone sulfonic acid compound and aluminum, said lakes being distinguished by their great fastness to light and purity of color, substantially as described.

5. The new color lakes comprising in combination an alkylized dehydrothiotoluidin, an aminooxyanthraquinone sulfonic acid and aluminum, said lakes being distinguished by their great fastness to light and purity of color, substantially as described.

[Claim 6 not printed in the Gazette.]

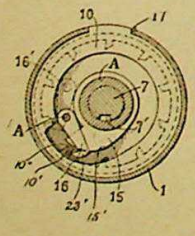
1,203,643. SUSPENDERS. CHARLES L. MOLLOY, Chicago, Ill. Filed May 10, 1915. Serial No. 27,088. (Cl. 241—16.)



1. The combination with the shoulder straps of suspenders, of a coupling device to which the rear ends of the straps are connected, and from opposite sides of which they extend divergingly, said device comprising opposite jaws between which the strap ends are held, the jaws being resiliently connected at one end and having at the opposite end a transverse slot, a clip engageable over the edge of the slot to hold the jaws closed, a looped strap passing through the slot, and garment attaching means carried by the looped strap.

2. The combination with the shoulder straps of suspenders, of a coupling device to which the rear ends of the straps are connected, and from opposite sides of which they extend, said device comprising opposite jaws open at the sides, and between which jaws the strap ends are held, the jaws being resiliently connected at one end and having their opposite ends provided with alined transverse slots, a clip engageable over the edge of the slot to hold the jaws closed, a looped strap passing through the slot and over the clip, and garment attaching means carried by said looped portion.

1,203,644. MECHANICAL COUNTER. JOSEPH O. MORRISON, Anderson, Ind. Filed Apr. 17, 1912. Serial No. 691,284. (Cl. 235—134.)



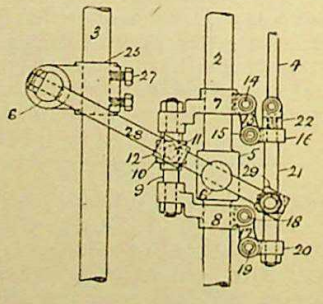
1. In an apparatus of the class described, in combination, a revoluble member normally occupying a predetermined position, operating means for moving the same in one direction, a second revoluble member normally occupying a predetermined position, means controlled by said first mentioned revoluble member and adapted to cause a fractional revolution of said second mentioned revoluble member during each complete revolution of said first mentioned revoluble member, transverse extensions on said revoluble members, and means movable in the reverse direction adapted to engage said extension when the revoluble members are in other than their predetermined positions and thereby return both of said revoluble members to their respective predetermined positions.

2. In an apparatus of the class described, in combination, a revoluble member normally occupying a predetermined position, operating means for moving the same in one direction, a second revoluble member normally occupying a predetermined position, means controlled by said first mentioned revoluble member and adapted to cause a fractional revolution of said second mentioned revoluble member during each complete revolution of said first mentioned revoluble member, transverse extensions on said revoluble members, and means movable in the reverse direction adapted to engage said extensions when the revoluble members are in abnormal position and thereby simultaneously return both of said revoluble members to their respective predetermined positions.

3. In an apparatus of the class described, in combination, a revoluble member normally occupying a predetermined position, operating means for moving the same in one direction, a second revoluble member normally occupying a predetermined position, means controlled by said first mentioned revoluble member and adapted to cause a fractional revolution of said second mentioned revoluble member during each complete revolution of said first mentioned revoluble member, transverse extensions on said revoluble members, a revoluble spindle upon which are loosely carried both of said revoluble members, means fixedly mounted on said spindle and adapted to engage the extensions when the revoluble members are in abnormal position and thereby return both of said revoluble members to their respective predetermined positions upon the turning of said spindle in a reverse direction, and means to operate the spindle.

4. In an apparatus of the class described, in combination, a revoluble member, ratchet means comprising a plurality of ratchet units, said ratchet means controlling the revolution of said revoluble member, a fixed member provided with an opening, said opening being adapted to expose one of said units, a second revoluble member, operating means for causing a revolution of said second mentioned revoluble member, a pawl, normally occupying a predetermined position within said opening and adapted to travel within said opening and thereby to engage said exposed unit once during each revolution of said second mentioned revoluble member, an extension on said pawl, a revoluble spindle, and a member controlled by the revolution of said spindle adapted to engage the extension on said pawl and return the pawl to its normally predetermined position within said opening.

1,203,645. VALVE-ACTUATING MECHANISM FOR FLUID-PRESSURE MOTORS. THOMAS WINTER NICHOLS, Gateshead, England. Filed Sept. 3, 1915. Serial No. 48,782. (Cl. 121—98.)



1. In valve actuating mechanism for fluid pressure motors, the combination of a stationary element, a piston-rod and a valve actuator in planes substantially parallel to said element, a rectilinearly reciprocatable member on said stationary element, a rocking member connected to the valve actuator and to said reciprocatable member, and an actuating lever fulcrumed in said stationary element and in operative connection with the piston-rod, rocking member and reciprocatable member.

2. In valve actuating mechanism for fluid pressure motors, the combination of a stationary element, a piston-rod and a valve-rod disposed in planes substantially parallel

to said element, a member rectilinearly reciprocatable on said element, a sliding gudgeon carried by said reciprocatable member, a rocking member connected to the valve-rod and to said reciprocatable member, and an actuating lever fulcrumed on said element, in operative connection at opposite ends with the piston-rod and rocking member, respectively and intermediate said ends with said sliding gudgeon.

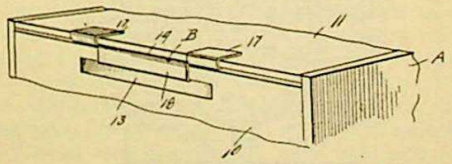
3. In a valve actuating mechanism for fluid pressure motors, the combination of a stationary element, a piston-rod and a valve actuator disposed in planes substantially parallel to said element, a rectilinearly reciprocatable member mounted on said stationary element, a rocking member connected to the valve actuator and to said reciprocatable member, a sliding gudgeon carried by the latter, and a valve actuating lever fulcrumed on said stationary element and in operative connection with said piston-rod, rocking member and gudgeon, said lever being also in sliding relation with said sliding gudgeon.

4. In valve actuating mechanism for fluid pressure motors, the combination of a stationary element, a piston rod and valve actuator disposed in planes substantially parallel to said element, a rectilinearly reciprocatable member mounted on said stationary element, a rocking member including interconnected links pivoted to said reciprocatable member and to the valve actuator, and a valve actuating lever, pivotally connected to said rocking member, fulcrumed on the stationary element and operatively connected to the piston-rod and reciprocatable member.

5. In valve actuating mechanism for fluid pressure motors, the combination of a stationary element, a piston-rod and a valve actuator disposed in planes substantially parallel to said element, a rectilinearly reciprocatable member mounted on said stationary element, a rocking member connected to the valve actuator and to said reciprocatable member, a sliding gudgeon carried by the latter, a valve actuating lever fulcrumed on said stationary element and in operative connection with said piston-rod, rocking member and gudgeon and means for preventing movement of said reciprocating member until its gudgeon reaches its extreme limits of movement.

[Claim 6 not printed in the Gazette.]

1,203,646. HUMIDOR. DAVID T. OLIVER, New York, N. Y. Filed Mar. 30, 1915. Serial No. 18,137. (Cl. 131—30.)



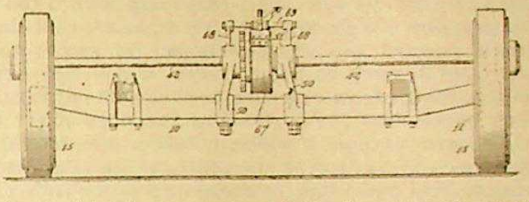
The combination with a box including a front wall provided with engaging means, a hinge lid having a recess therein opening through its free edge, of a moisture carrying element removably engaged in said recess, and a tongue on the outer edge of said element forming a hook for engagement with said engaging means on the front wall of the box to secure the lid in closed position.

1,203,647. TRACTOR DRIVING-GEAR. ALFRED ORTENGREN, Brooklyn, N. Y., assignor to Elizabeth Christie, Weehawken, N. J. Continuation in part of application Serial No. 705,228, filed June 22, 1912. This application filed June 2, 1914. Serial No. 842,455. (Cl. 21—114.)

1. A wheel having an outer relatively rotatable member, an inner member adapted to be pivotally secured to one end of an axle and having a removable annular member on which the rotatable member is mounted.

2. A wheel having an outer relatively rotatable member, a flanged internal gear removably secured thereto, an inner member adapted to be pivotally secured to one end of an axle and having a removable ring on which the rotatable member is mounted.

3. A wheel having an outer relatively rotatable member, a flanged internal gear removably secured thereto, an inner member adapted to be pivotally secured to one end of an axle and having a removable ring on which the rotatable member is mounted, and interposed frictionless bearings between the outer and inner members, said internal gear being arranged to extend freely into the removable ring of the inner member.

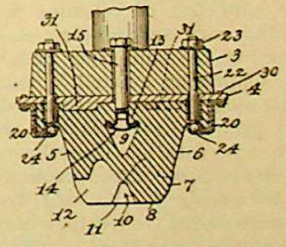


4. A wheel having an outer relatively rotatable member, a removable internal gear secured to the outer member, an inner member having an annular flange adapted to fit loosely over the internal gear of the rotatable member, a removable ring surrounding the annular flange on the inner member, and frictionless bearings between said ring and the outer member.

5. A wheel having an outer relatively rotatable member, a removable internal gear secured to the outer member, an inner member having an annular flange adapted to fit loosely over the internal gear of the rotatable member, a removable ring surrounding the annular flange on the inner member, frictionless bearings between said ring and the outer member, an eccentric sleeve forming a part of the inner member, a pinion rotatively and removably mounted therein and adapted to mesh with the said internal gear.

[Claim 6 not printed in the Gazette.]

1,203,648. SECURING MEANS FOR VEHICLE-TIRES. MAX CYRUS OVERMAN, New York, N. Y. Filed Jan. 13, 1913. Serial No. 741,675. (Cl. 152—6.)



1. In combination, a wheel, a rubber tire having at its sides outwardly projecting basal clamping portions which, when uncompressed, are partially separated from the side of the tire by an upright space extending toward the wheel-periphery, clamping means which compresses said clamping portions toward the wheel-periphery to secure the tire thereto, and relatively incompressible means in the clamping portions extending radially outward in the given clamping portion approximately to its upright space.

2. In combination, a wheel, a rubber tire having at its sides outwardly projecting basal clamping portions, a plurality of longitudinally spaced relatively incompressible tubes extending radially outward through the clamping portions for part of their depth, and a plurality of clamping means compressing the clamping portions toward the wheel-periphery, each comprising a head and a stem, the head engaging the clamping portion, and the stem passing through the clamping portion and one of the aforesaid tubes and engaging the wheel.

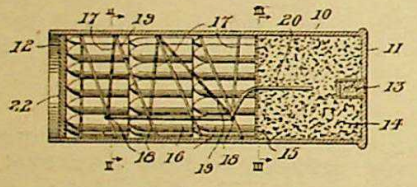
3. In combination, a wheel, a rubber tire having at its sides outwardly projecting basal clamping portions, a plurality of longitudinally spaced relatively incompressible tubes extending radially outward through the clamping portions for part of their depth, and a plurality of clamping means compressing the clamping portions toward the wheel-periphery, each comprising a bolt extending from the wheel through one of the tubes, and a plate on the end of said bolt beyond the clamping portion, said plate extending

laterally to the edge of the clamping portion and thence inwardly at the side of the clamping portion and having a foot adapted to contact with the wheel when the clamping portion has been compressed, and means for connecting said foot to the wheel.

4. In combination, a wheel, a rubber tire having at its sides outwardly projecting basal clamping portions which, when uncompressed, are partially separated from the side of the tire by an upright space extending toward the wheel-periphery, clamping means which compresses said clamping portions toward the wheel-periphery to secure the tire thereto, and positive stop means which prevents the clamping-means from over-compressing said outwardly projecting basal clamping-portions at the sides of the tire.

5. In combination, a wheel, a rubber tire having load-supporting walls adjacent an opening in its base, said walls having lateral basal flanges projecting both outwardly and inwardly, the latter into said opening in the base of the tire; and inner and outer clamping means for securing the tire to the wheel, the inner acting upon and compressing the inner basal flanges of the tire toward the wheel-periphery without definite limit to the degree of the compression, and the outer compressing the outer basal flanges toward the wheel periphery only to a limited extent that is short of giving an outward tendency to the tire-walls.

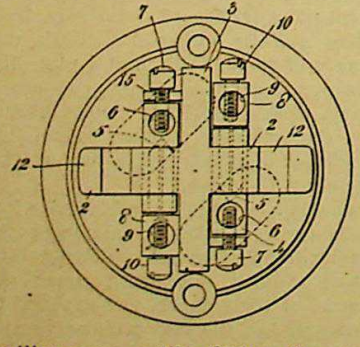
1,203,649. MULTIPLE CARTRIDGE. VASILJ PAPUGA, South Omaha, Nebr. Filed June 19, 1916. Serial No. 104,411. (Cl. 102—15.)



1. A cartridge comprising a shell, an explosive positioned therein, a plurality of missiles arranged within the shell, a securing cord surrounding the said missiles, and a fuse connecting the said cord and explosive.

2. A cartridge comprising a shell, a percussion cap in the closed end thereof, powder packed within the shell adjacent the said cap, a disk engaging the said powder and provided with a perforation therethrough, a plurality of bundles of separate projectiles successively positioned within the shell forwardly of the said disk, combustible securing means surrounding the said bundles, connecting means for the bundles attached to the said securing means, a fuse attached to the said securing means of the separate bundles and having a free end portion extending through the perforation of the said disk and arranged within the said powder, and a closing disk within the outer open end of the shell.

1,203,650. CEILING-ROSE. EDGAR ISON PARKES, Bushey, England. Filed Oct. 26, 1911. Serial No. 656,931. (Cl. 173—329.)



1. In a ceiling rose or like fitting, the combination of an insulating base, a cord grip integral therewith, circuit terminals slidably mounted in and supported by said base, and lamp terminals carried by and slidably mounted in said circuit terminals.

2. In a ceiling rose the combination of an insulating base, an insulating rib integral with said base and upstanding therefrom, terminals slidably mounted in said rib, a cord grip on said rib and a transverse rib on said base separating the terminals of opposite polarity.

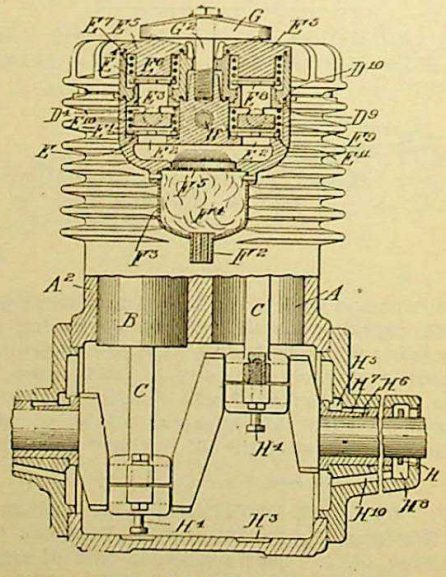
3. In a ceiling rose, the combination of an insulating base, two upstanding ribs on said base arranged to form a cross, one of said ribs having a pair of non-circular holes one on either side of the other rib, a pair of metal blocks each passing through one of said holes, means for connecting one of the main wires to each of said metal blocks, a pair of plugs one fitting into each of said metal blocks and means for connecting the flexible wires to said plugs.

4. In a ceiling rose, the combination of an insulating base, an insulated rib upstanding therefrom and pierced with a pair of non-circular holes passing therethrough, a pair of metal blocks one fitting into each of said holes, a terminal screw for a main wire at one end of each of said metal blocks, a plug terminal at the other end of each of the metal blocks adapted to take the flexible wires, and a stop integral with the insulating base with its effective surface parallel to said pierced rib and at right angles to the direction of sliding of said metal blocks and located to take the thrust of each of the metal blocks when said plugs are inserted and to prevent removal of said metal blocks without removal of said terminal screws.

5. In a ceiling rose, the combination of an insulating base, a perforated insulating rib upstanding therefrom, metal sockets passing through the perforations in said ribs, means for securing circuit wires to said sockets, metal plugs sliding in and making electric connection with said sockets, and means for securing lamp wires to said plugs.

[Claims 6 to 8 not printed in the Gazette.]

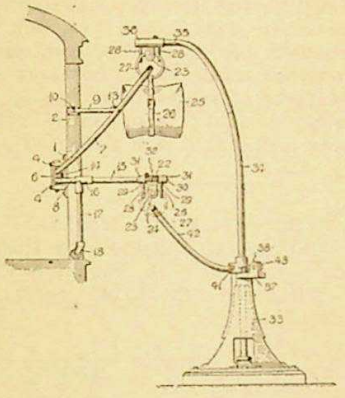
1,203,651. FLUID-PUMP. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed Feb. 7, 1914. Serial No. 817,192. (Cl. 230—34.)



In a pump, the combination with a cylinder and a piston therein, of a casing removably attached to said cylinder and embodying a lower section including a pair of valve chambers communicating with the cylinder, a second valve chamber separated from and mounted directly upon each of the first named chambers and each provided with an outlet passage, a seat portion removably carried by the lower portion of each of the upper chambers and having an integral valve seat, a disk valve engaging said seat, a removable top for each of the upper chambers having a downwardly projecting integral portion disposed centrally of the chamber and in the path of said valve to

limit its upward movement, a valve seat formed integrally at the bottom of each of the lower chambers, a disk valve engaging each of the last mentioned seats, an integral valve stop portion formed upon the aforesaid seat portions and projecting centrally of the chambers into the path of the valves in the lower chambers, an air inlet connected with said lower section of the casing and an air filtering device attached directly at the bottom of said lower section and supported thereon.

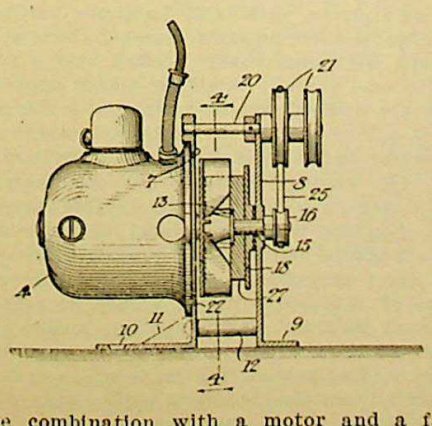
1,203,652. MAIL-BAG CATCHER. MEAKIN RIGNEY, Detroit, Mich., assignor of one-half to Nathan C. Taliaferro, Detroit, Mich. Filed Nov. 9, 1914. Serial No. 871,036. (Cl. 258—26.)



1. In a mail receiving and delivering apparatus, a car equipment comprising a pivoted socket member, receiving and delivery arms carried thereby, a leg supporting said delivery arm, a foldable section carried by the outer end of said arm, a head carried by the outer end of said section, a rearwardly extending pin supported by said head and from which mail matter is adapted to be suspended by a ring, and yieldable detents carried by said head and coöperating with said pin in correctly positioning the ring upon said pin.

2. In a mail receiving and delivering apparatus, a car equipment comprising a pivoted socket member adapted for attachment to the inner side of a car wall, a delivery arm carried thereby and adapted to have the outer end thereof swung out of the car, a leg movable on the floor of the car and supporting the delivery arm, a foldable section carried by the outer end of said arm, a head carried by the outer end of said section, a rearwardly extending pin supported by said head and from which mail matter is adapted to be suspended by a ring, means carried by said head and coöperating with said pin in correctly positioning the ring upon said pin.

1,203,653. POWER-TRANSMITTING DEVICE. AUGUST E. ROEVER, Brooklyn, N. Y. Filed Sept. 30, 1915. Serial No. 53,246. (Cl. 64—13.)



1. The combination with a motor and a fan driven thereby, of means coöperating with said fan for transmitting rotary motion from said motor, the organization being such that the removal of the fan proper will break the connection between the motor and said means.

2. The combination with a motor and a fan driven thereby, of means coöperating with the blades of said fan for transmitting rotary motion from said motor, and means for supporting said motion-transmitting means.

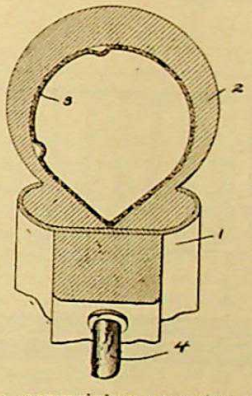
3. The combination with a motor and a fan driven thereby, of a clutch member coöperating with the fan proper for transmitting motion from said motor.

4. The combination with a motor and a fan driven thereby, of a clutch member coöperating with said fan for transmitting motion from said motor, and means for supporting said clutch member for rotary movement.

5. The combination with a motor and a fan driven thereby, of means for transmitting rotary motion from said motor and comprising a disk adapted to engage the blades of said fan.

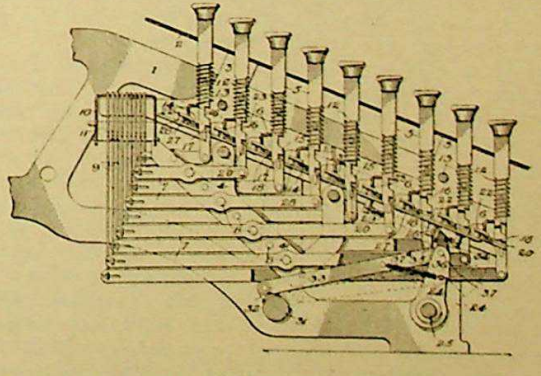
[Claims 6 to 26 not printed in the Gazette.]

1,203,654. INNER TUBE FOR PNEUMATIC TIRES. LEIGH R. SCHAAP, Longmont, Colo. Filed Jan. 28, 1916. Serial No. 74,725. (Cl. 152—13.)



A pneumatic tire, comprising an outer case and an inner tube made of woven fabric saturated with paper fiber, substantially as described.

1,203,655. KEYBOARD. JOHN A. SCHLEICHER, Wilkes-Barre, and CHARLES V. WILGUS, Kingston, Pa., assignors to The Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed June 9, 1913. Serial No. 772,631. (Cl. 235—26.)



1. In a calculating machine, the combination with a main drive shaft, and a lock keyboard, including a series of keys having stems; of locking bars having apertures to confine the keystems; latches on the bars to lock the keys; and means controlled by the main drive shaft to hold the latches normally idle.

2. In a lock keyboard, the combination with a series of keys having notched stems; of locking bars having apertures through which the keystems pass; and means to shift the locking bars and their apertures relatively to the keystems to confine the keystems in the apertures.

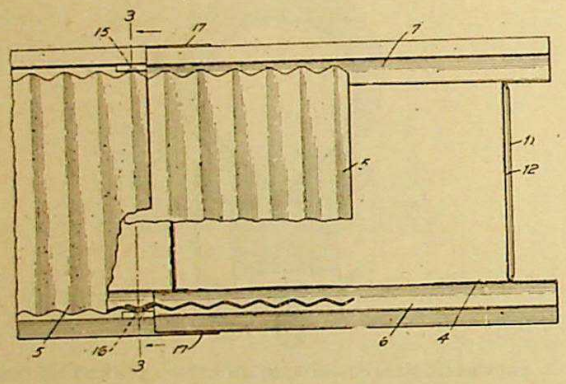
3. In a lock keyboard, the combination with a series of keystems, and catches on the stems; of locking bars having angularly-shaped apertures through which the keystems pass; the catches normally alining with one branch of the respective angular apertures; and means to shift the locking bars relatively to the keystems to interrupt said alinement.

4. The combination with a keyboard; locking means for the keys; and a restraining and restoring member to control the locking means; of a positively driven device flexible in one direction to control the restraining and restoring member.

5. The combination with a keyboard; locking means for the keys; and a restraining and restoring member to control the locking means; of a positively driven arm to control the restraining and restoring member; and a flexible detent on said arm to hold the member against shifting.

[Claims 6 to 11 not printed in the Gazette.]

1,203,656. METAL CULVERT. WILLIAM T. SHANNON, Cincinnati, Ohio. Filed Feb. 3, 1916. Serial No. 76,036. (Cl. 61—9.)



1. A culvert composed of sheet metal sections, each section consisting of an arched cover plate and a substantially flat bottom plate having longitudinally extending trough-shaped grooves formed near its longitudinal edges, the grooves of adjacent bottom plates overlapping and engaging each other, the arched plates being mounted on the bottom plates with their straight edges located in the grooves, the subjacent end of each bottom plate having lugs extending inwardly and each superimposed end of each arched plate having outwardly extending lugs adapted to lock with the inwardly extending lugs when the second mentioned lugs are brought beneath them.

2. In a culvert section, a top member and a bottom member, comprising a substantially flat plate having longitudinally extending top member engaging grooves, and a transversely extending flange-engaging slot formed therein a flange being formed on the opposite end of each flat bottom plate and adapted to occupy the flange engaging slot of each adjacent bottom plate, and locking means formed on the top and bottom members adapted to be engaged to lock the members together when assembled, said locking means consisting of flexible lugs formed on the bottom member and extending into the top member engaging grooves, and rigid lugs formed on the top member and adapted to engage the flexible lugs when the members are brought together whereby the flexible lugs will permit movement of the rigid lugs beyond them and will spring to their normal positions to lock the rigid lugs against withdrawal.

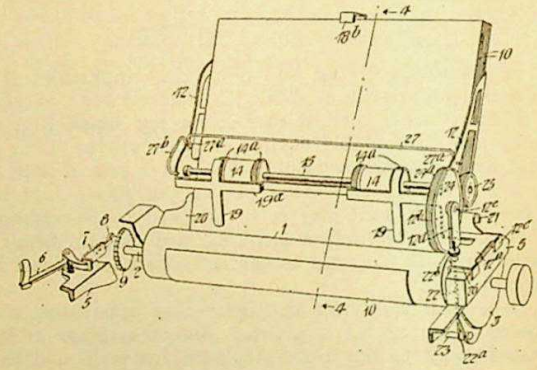
3. A culvert composed of interlocking bottom plates having longitudinally extending cover plate-receiving grooves formed therein, and arched cover plates mounted on the bottom plates with their longitudinal edges in the grooves, said bottom plates having spring lugs formed thereon and said cover plates having rigid lugs formed thereon adapted to lockingly engage one another when the plates are moved to their assembled positions.

4. A culvert composed of interlocking bottom plates having flow-obstructing ribs formed thereon and cover-receiving grooves formed therein, and overlapping arched cover plates mounted on the bottom plates with their longitudinal edges mounted in the grooves, said bottom plates and said cover plates having coöperating lugs formed thereon, adapted to lock the cover plates and bottom plates together, the lugs of one of said sets of plates being spring lugs and the lugs of the other of said sets of plates being rigid.

5. A culvert composed of a series of interlocking sections, each section comprising a bottom plate having cover-receiving grooves formed therein, a flange located at one end thereof, and a flange-receiving slot formed in the other end thereof, and a cover plate mounted on the bottom plate and having its edges mounted in the grooves formed in the cover plate, said cover and bottom plates having coöperating lugs formed thereon adapted to lock the plates together when they are assembled, the lugs of one of said sets of plates being spring lugs and the lugs of the other of said sets of plates being rigid.

[Claim 6 not printed in the Gazette.]

1,203,657. TYPE-WRITING MACHINE. JOHN H. SHECKLER, Chicago, Ill., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 19, 1914. Serial No. 819,637. (Cl. 197—130.)



1. In a typewriting machine, the combination of a traveling carriage; a revoluble platen mounted in said carriage; pressure rolls co-acting with said platen; a paper table for guiding work-pieces between said pressure rolls and said platen, said table having a beading along its upper edge; a sheet magazine located above said paper table; means for consecutively feeding sheets from said magazine to said platen; and retaining means engaging said beading to hold said magazine in position.

2. In a typewriting machine, the combination of a traveling carriage; a revoluble platen mounted in said carriage; pressure rolls co-acting with said platen; a paper table for guiding work-pieces between said pressure rolls and said platen, said table having a beading along its upper edge; a sheet magazine located above said paper table; means for consecutively feeding sheets from said magazine to said platen; retaining means engaging said beading at the rear of said magazine; and a support for the front of said magazine, said retaining means and said support serving to hold said magazine in position.

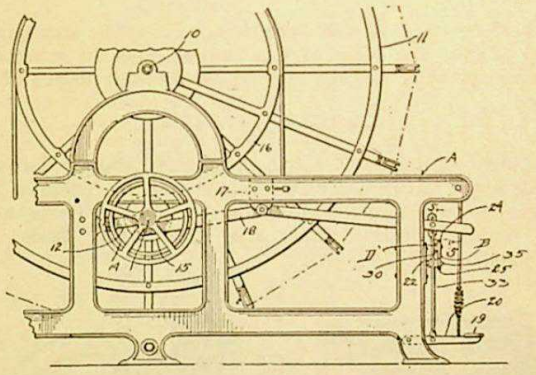
3. In a typewriting machine, the combination of a traveling carriage, a revoluble platen carried thereon, pressure rolls co-acting with said platen, a paper table for guiding work-sheets between said pressure rolls and said platen, a sheet magazine supported at its rear on the upper edge of said paper table, a foot supporting said paper table at its front, and means interlocking with the paper table at the rear of the magazine, to prevent the latter from sliding toward the front or the rear of the machine, said foot being provided with means to prevent endwise movement of the said magazine along the paper table.

4. In a typewriting machine embodying a carriage provided with a paper shelf having a bead on its upper edge, the combination of a work-feeding magazine located above said shelf; a depending extension on said magazine engaging one of the end members of the carriage, to support the magazine and prevent endwise movement thereof relatively to said carriage; and retaining hooks secured to the rear portion of said magazine and engaging said bead of the magazine.

5. In a typewriting machine embodying a carriage provided with a paper shelf having a bead on its upper edge, the combination of a work-feeding magazine located above said shelf; a support on said magazine engaging said carriage, to prevent endwise movement of said magazine relatively to said carriage; retaining hooks secured to said magazine and engaging said bead; and means acting conjointly with said hooks, when so engaged, to prevent tilting of said magazine.

[Claims 6 to 20 not printed in the Gazette.]

1,203,658. TREADLE STARTING MECHANISM FOR MACHINES. MATTHEW VAN DER SLUYS, Paterson, N. J. Filed Apr. 4, 1916. Serial No. 88,964. (Cl. 74—81.)



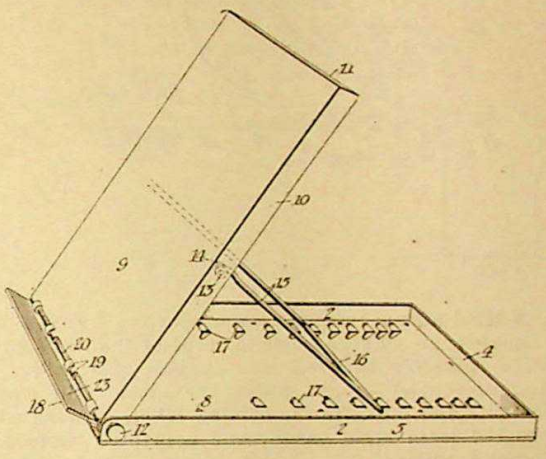
1. In a beaming machine including a frame supporting driving and driven elements one of which is movable into and out of operative relation with the other, an operating lever for the movable element pivoted on the frame, a treadle pivoted on the frame, and connections between each end of the treadle and the lever whereby the depression of either end of the lever will operate the lever in a direction to move the movable element into operative relation with the other element.

2. In a beaming machine including a frame supporting driving and driven elements one of which is movable into and out of operative relation with the other, an operating lever for the movable element pivoted on the frame, a treadle pivoted on the frame, a link connecting one end of the treadle with said lever, and connections between the other end of the treadle and said link whereby the depression of the end of the treadle remote from the link will positively operate the latter to move the lever in a direction to throw the elements into coöperative position.

3. In a beaming machine including a frame supporting driving and driven elements one of which is movable into and out of operative relation with each other, an operating lever for the movable element, pivoted on the frame, a treadle pivoted on the frame, a link connecting one end of the treadle with said lever, an angle lever pivoted on the frame and operatively connected with said link, a second angle lever pivoted on the frame at the side of the latter remote from the first angle lever, a rod connecting given arms of said angle levers, and a link connecting one arm of the second angle lever with the end of the treadle remote from the first angle lever.

1,203,659. COPY-HOLDER. STEPHEN T. SMITH, Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 8, 1914. Serial No. 837,146. (Cl. 120—28.)

1. A copy holder comprising a base plate having upwardly extending walls and a plate with paper supporting means thereon having downwardly extending walls of smaller dimensions, a hinge connection between said plates at one end, a ball pivoted to the second mentioned plate, a series of forwardly directed lugs on the inside bottom of the base plate with which the bottom of the ball may engage in any adjusted position, the said lugs being arranged on each side of the bottom plate near the walls thereof thereby providing spaces between said lugs for storage purposes.



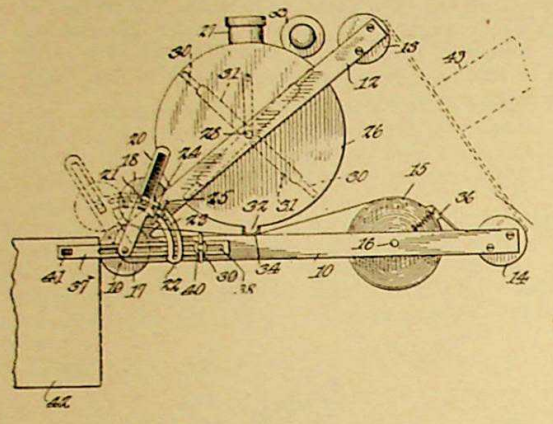
2. A copy holder comprising a base plate and a holder plate having paper supporting means thereon, a hinge connection between said plates at the ends thereof, the holder plate being provided with downwardly extending walls and the base plates with upwardly extending walls of slightly larger dimensions whereby the holder plate may nest within the base plate, a wire bail hinged to the holder plate near the middle thereof and formed at its free end to constitute the foot of the said bail, the bottom of the base plate being provided with forwardly directed lugs struck up from said bottom, the foot of the bail being adapted to engage with said lugs to hold the upper plate in any desired angle.

3. A copy holder comprising a base plate and a holder plate, said holder plate having paper supporting means thereon and said plates having telescoping side walls, a hinge connection for said plates, a member hinged to the side walls of the holder plate and means coöperating therewith to hold said holder plate in various angular adjusted positions upon said base plate.

4. A copy holder comprising a base plate formed of sheet metal and perpendicular walls therefor, a holder plate formed of sheet metal and having perpendicular walls adapted to nest within the walls of the base plate whereby the two form a receptacle, a hinge rod passing through the side walls of the base plate and of the holder plate near one end thereof, the bottom of the base plate being provided on each side near the side wall thereof with a row of forwardly projecting lugs struck up from the metal of the bottom, a wire bail pivoted at its ends thereof to the side walls of the holder plate and its foot being wide enough to extend between the rows of struck up lugs, the length of said bail being sufficiently small to enable it to be folded within the supporting plate, and a ledge pivoted to the supporting plate at one end thereof on its top whereby a folding support for holding copy is provided.

5. A copy holder comprising a base plate and a holder plate, the two being hinged together near one end thereof, the holder plate being provided with a bail and a base plate with lugs with which said base plate engages, whereby the two are held in any adjusted position, and a ledge pivoted to the holder plate at or near its hinged end, said ledge provided with rearwardly extended wings and said supporting plate with inturned portions adapted to be engaged by said wings whereby said ledge is swung outwardly to form a support, the said wings and inturned portions forming a stop to limit the turning movement.

1,203,660. LABEL-AFFIXER. WORTH R. STEARNS and ALBERT H. MCDERMOTT, Spokane, Wash. Filed Oct. 29, 1915. Serial No. 58,583. (Cl. 216—6.)



1. A label affixer comprising a supporting frame, a label roll support, an affixing roller in front of the roll support, a paste reservoir between said support and roller, and having an outlet across which the label strip travels, a tension roller opposite the affixing roller, between which rollers the label strip passes, and a pivoted support for the tension roller.

2. A label affixer comprising a supporting frame, a label roll support, an affixing roller in front of the roll support, a paste reservoir between said support and roller, and having an outlet across which the label strip travels, a tension roller opposite the affixing roller, between which rollers the label strip passes, a pivoted support for the tension roller, and means for locking said support to the supporting frame.

3. A label affixer comprising a supporting frame, a label roll support, an affixing roller in front of the roll support, a paste reservoir between said support and roller, and an edge-guided gage bar extending forward from the supporting frame.

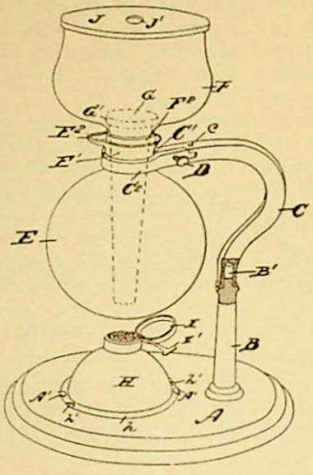
4. A label affixer comprising a supporting frame consisting of laterally spaced bars having upstanding arms at their forward ends, said arms being inclined rearward, handles carried by the rear ends of the bars and the arms, a paste reservoir supported between the arms and having a bottom outlet, a label roll support supported between the rear ends of the bars, and an affixing roller supported between the front ends of the bars, the reservoir outlet being located between said roller and the roll support.

5. A label affixer comprising a supporting frame consisting of laterally spaced bars having upstanding arms at their forward ends, said arms being inclined rearward, handles carried by the rear ends of the bars and the arms, a paste reservoir supported between the arms and having a bottom outlet, a label roll support mounted between the front ends of the bars, an affixing roller between the front ends of the bars, a shaft supporting said roller and carried by the bars, arms pivoted on said shaft, a tension roller carried by said arms and located opposite the affixing roller, and means for locking the arms which carry the tension roller.

1,203,661. COFFEE-PERCOLATOR. HENRY TASK, Detroit, Mich., assignor of one-half to John Laube, Detroit, Mich. Filed June 25, 1915. Serial No. 36,164. (Cl. 53—3.)

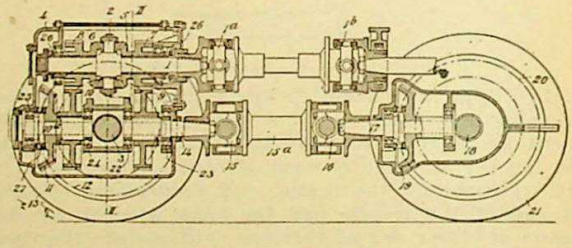
1. In a device of the character described, a fluid container, means for supporting the fluid container, a funnel adapted to be supported within the container having within its bowl an upwardly projecting annular flange encircling the tubular stem of the funnel, a strainer located within the stem of the funnel, and means for securing the strainer to the annular flange of the funnel.

2. In a device of the character described, a fluid container, means for supporting the fluid container, a funnel adapted to be supported within the container having within its bowl an upstanding annular flange encircling



the hollow stem of the funnel, a removable strainer located within the stem of the funnel, and an expansible ring for securing the strainer to the annular flange of the funnel.

1,203,662. GEARING. JOHN GODFREY PARRY THOMAS, Chiswick, London, England, assignor to Thomas Foreign Patents Limited, London, England, a Corporation of Great Britain. Filed June 28, 1913. Serial No. 776,345. (Cl. 74—34.)



1. In a vehicle having two driven axles, the combination with one of said axles of a casing, a driving shaft therein at right angles to said axle, a balance gearing having its central member connected to said shaft, spur pinions attached to the side members of said balance gearing, shafts on a level with but at right angles to the vehicle axle, spur wheels on said shafts meshing with said spur pinions respectively, and means for connecting said shafts with the vehicle axles.

2. In a vehicle having two driven axles, the combination with one axle of a casing thereupon, a driving shaft having bearings in said casing, a balance gearing having its center member secured to said shaft two further shafts in said casing each in driving connection with one of said axles, and gearing within said casing interconnecting the side members of said balance gearing with the shafts in driving connection with the respective vehicle axles.

3. In a vehicle having two driven axles, the combination with one axle of a casing, a driving shaft mounted therein, balance gearing having its center member secured to said shaft, spur pinions attached to the side members of said balance gearing, shafts on a level with but at right angles to the vehicle axle mounted in said casing, spur wheels on said shafts meshing with said spur pinions, a bevel wheel on one of said shafts, and a bevel wheel on the vehicle axle meshing therewith.

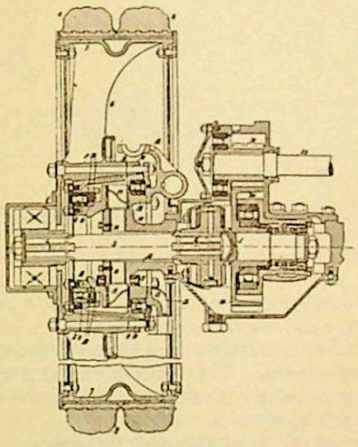
4. In a vehicle having two driven axles, the combination with one axle of a casing mounted thereupon, a driving shaft mounted in said casing, a balance gearing hav-

ing its center member attached to said shaft, and reduction gearing included in said casing connecting the side members of said balance gearing with the vehicle axles.

5. In a vehicle having two driven axles, the combination with one of said axles of a casing, a driving shaft therein at right angles to said axle, a balance gearing having its central member connected to said shaft, spur pinions attached to the side members of said balance gearing, shafts on a level with but at right angles to the vehicle axle, spur wheels on said shafts, of greater diameter than said spur pinions, meshing with said spur pinions respectively, and means connecting said shafts with the vehicle axles.

[Claim 6 not printed in the Gazette.]

1,203,663. DRIVING OF ROAD-VEHICLES. JOHN G. P. THOMAS, Chiswick, London, England, assignor to Thomas Foreign Patents Limited, Kensington, London, England, a Corporation of Great Britain. Filed Sept. 25, 1914. Serial No. 863,440½. (Cl. 21—90.)



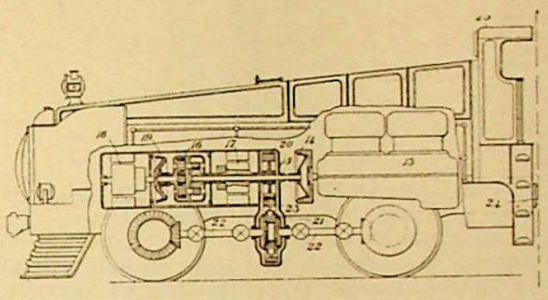
1. In a motor vehicle the combination with a wheel of a frame member, substantially vertical pivots upon said frame member supporting said wheel and arranged in the plane thereof, a shaft passing centrally and freely through said wheel, a driving shaft and universal joints mounted upon said first shaft, with co-planar pins and equidistant from said pivots connecting said shaft with the wheel and with the driving shaft respectively.

2. In a motor vehicle the combination with a wheel of a frame member, pivots in the plane of said wheel supported by said frame member, a sleeve rotatable upon said pivots, bearings interposed between said sleeve and the hub of the wheel, a driving shaft and a driving connection between said shaft and the hub of the wheel comprising universal couplings equi-distant from said pivots on opposite sides thereof and arranged with their corresponding parts in the same plane.

3. In a motor vehicle, the combination with a wheel of a frame member, substantially vertical pivots supported in said frame member in the plane of the wheel and carrying the wheel, a driving shaft, a central shaft passing freely through the center of said wheel, parallel cross-pins with their axes co-planar fast on said central shaft equi-distant from said pivots on opposite sides thereof, die blocks having spherical surfaces engaging upon said cross-pins and guides attached to the driving shaft and wheel hub and engaging the respective die blocks, the one tangentially and the other spherically.

4. In a motor vehicle, the combination with a wheel of a frame member, substantially vertical pivots upon said frame member supporting said wheel and arranged in the plane thereof, a shaft passing centrally and freely through said wheel, a driving shaft transverse to the vehicle with its axis above the center of the wheel in order to leave a substantial free space under the vehicle, an intermediate shaft, universal joints upon said first-named shaft equi-distant from said pivots connecting said first-named shaft with the wheel and with said intermediate shaft respectively, and gearing between said driving shaft and said intermediate shaft.

1,203,664. DRIVING OF ROAD AND RAIL VEHICLES. JOHN G. P. THOMAS, Kensington, London, England, assignor to Thomas Foreign Patents Limited, London, England, a Corporation of Great Britain. Filed Apr. 7, 1915. Serial No. 19,835. (Cl. 105—222.)



1. In an automobile vehicle the combination of a prime motor, an electric generator driven thereby, an electric motor receiving power electrically from said generator, located in line with said prime motor and generator and between them, and gearing connection from said electric motor to the vehicle wheels.

2. In an automobile vehicle the combination of a prime motor, an electric generator driven thereby, an electric motor receiving power electrically from said generator, located in line with said prime motor and generator and between them, and gearing connection from said electric motor to the vehicle wheels located between the motor and the prime motor.

3. In an automobile vehicle the combination with a pair of axles, of a prime motor, an electric generator driven thereby, an electric motor located between the prime motor and the generator and in line with them, the weight of all three machines coming upon the said pair of axles, a differential gear, shafts connecting the said members of said gear with respective vehicle axles, and a driving connection between said electric motor and the center member of said differential gear.

4. In an automobile vehicle the combination with a pair of vehicle axles, of an electromechanical power transmission system borne by the said axles, and comprising a prime motor, an electric generator driven thereby and an electric motor located between said prime motor and generator, a gear casing attached to the casing of said motor, a gear wheel within said casing upon the motor shaft, a differential gear within and supported by said casing and driven by said gear wheel, and connections between the side members of said differential gear and the respective vehicle axles.

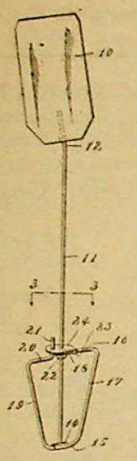
5. An automobile vehicle comprising two trucks, a prime motor upon each truck driving the axles thereof through electromechanical transmission mechanism and a driver's cab supported upon the two trucks.

[Claims 6 and 7 not printed in the Gazette.]

1,203,665. GRIDDLE-CAKE TURNER. WILLIAM VOGEL, New York, N. Y. Filed Sept. 23, 1915. Serial No. 52,160. (Cl. 65—3.)

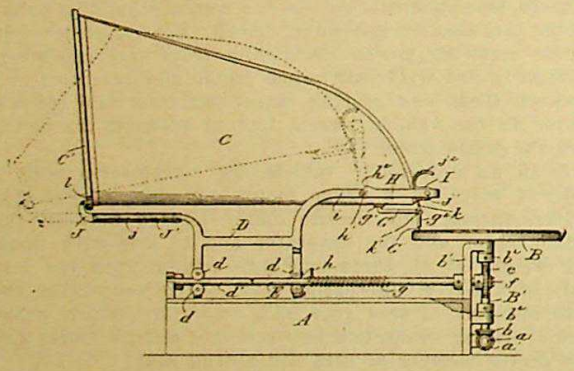
In a griddle cake turner, the combination with a blade and a stem attached thereto, of a handle comprised of a single strand of round wire forming a substantially triangular loop, one side being resiliently movable, and having an upturned end parallel with said stem, a saddle forming a foot bearing for said stem at the apex end of said loop, a second bearing at the end of the handle wire, means for maintaining said stem in its bearings, a perforated crank rigidly secured to said stem beyond the sec-

ond bearing, a limit stop formed therewith and a connection between the end of the movable side of the handle



loop and the perforation in said crank whereby the latter may be partially rotated by compressing the handle loop.

1,203,666. PHONOGRAPH. EDWIN WALKER, Erie, Pa. Filed Sept. 25, 1907, Serial No. 394,585. Renewed Mar. 30, 1916. Serial No. 87,874. (Cl. 274—13.)



1. In a phonograph, the combination with a record carrier, of a traveling carriage movable in a path radially with respect to the record carrier, a reproducing trumpet secured to said carriage and having a stylus positioned for contact with a record on said record carrier the weight of said trumpet being jointly supported by the carriage and the stylus, and means for slidably and pivotally securing the trumpet to said carriage, whereby the trumpet may be moved forwardly on the slidable connection and tilted upwardly on the pivotable connection to assume a position free from the record carrier.

2. In a phonograph, the combination with a rotatable record carrier, of a traveling carriage, impelling means for imparting movement to said carriage simultaneously with the rotation of the record carrier, said carriage being operated at less speed than the record carrier and being movable in a path radially to said record carrier, a reproducing trumpet the weight of which is imposed jointly upon said traveling carriage and upon a stylus cooperating with the reproducing trumpet, and means for slidably and pivotally connecting said trumpet to said carriage.

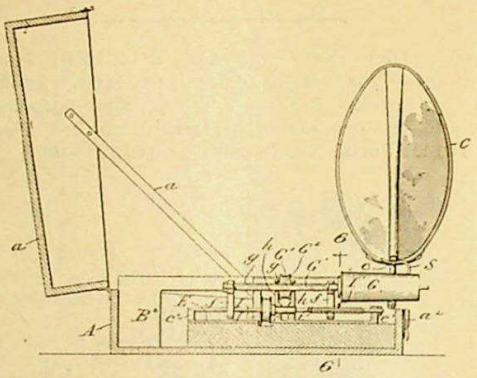
3. In a phonograph, a traveling carriage, a bail pivoted thereto, and a trumpet pivoted to the carriage and to the bail for the purpose of properly positioning the trumpet in operative relation to a disk or record.

4. In a phonograph, a traveling carriage, a bail pivoted thereto, and a combined trumpet and reproducer pivoted to the carriage and to the bail for the purpose of properly positioning the reproducer and trumpet in operative relation to a disk or record, said bail being adapted to be swung on its pivotal axis for tilting the trumpet, whereby the reproducer is removed from its operative position relative to the disk or record.

5. In a phonograph, a traveling carriage, a reproducer and trumpet pivotally and slidably connected to said carriage, and a bail pivoted to the carriage and connected to the trumpet and reproducer for supporting the latter in a raised position.

[Claims 6 and 7 not printed in the Gazette.]

1,203,667. PHONOGRAPH. EDWIN WALKER, Erie, Pa. Filed Sept. 25, 1907, Serial No. 394,584. Renewed Mar. 30, 1916. Serial No. 87,875. (Cl. 274—20.)



1. In a phonograph, a reproducer, a record carrier, a motor for operating one of said parts, a brake element separate from the record carrier, said brake element being rotated by the motor, and a combined brake and reproducer support coöperating with the motor driven brake element and with the reproducer, whereby an adjustment to one position of the combined brake and reproducer support operates to separate the reproducer and the record carrier relatively to each other and to apply the resistance of the brake to the motor.

2. In a phonograph, a relatively stationary reproducer, a mandrel shaft adapted to carry a record mandrel, a motor including a rotatable brake element, said brake element being separate from the record mandrel, means operated by the motor for imparting to the mandrel shaft and the record mandrel a slidable and rotative movement relative to the reproducer, and a combined brake and reproducer support coöperating directly with the motor-driven brake element and with the reproducer.

3. In a phonograph, a non-traveling reproducer, a mandrel shaft adapted to carry a record mandrel, a motor, means operated by the motor for imparting to the mandrel shaft and the record mandrel a slidable and rotative movement relative to the reproducer, a brake element separate from the record mandrel, said brake element being operated directly by the motor, and means coöperating with the motor driven brake element and with the reproducer whereby the reproducer may be moved relatively to the record mandrel and the motor arrested at one operation.

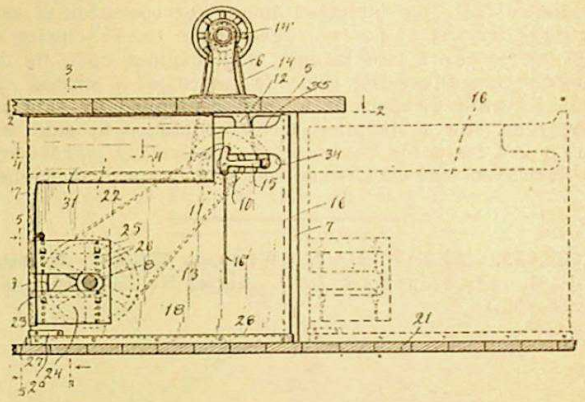
4. In a phonograph, a non-traveling reproducer, a mandrel shaft adapted to carry a record mandrel, a motor, means operated by the motor for imparting to the mandrel shaft and the record mandrel a slidable and rotative movement relative to the reproducer, a brake element separate from the record mandrel, said brake element being rotated directly by the motor, a second brake member cooperating with the rotatable brake member, a reproducer support movable to a position for lifting the reproducer from contact with a record on the record mandrel, and means connecting the reproducer support with the second brake member, whereby the adjustment of the reproducer support to one position operates the connecting means to apply the second brake member to the rotatable brake member.

5. In a phonograph, a non-traveling reproducer, a mandrel shaft adapted to carry a record mandrel, a motor, means operated by the motor for imparting to the mandrel shaft and the record mandrel a slidable and rotative move-

ment relative to the reproducer, a brake element separate from the record mandrel, said brake element being rotated directly by the motor, a second brake member coöperating with the rotatable brake member, a slidable reproducer support movable into and out of engagement with the reproducer, and a brake lever intermediate the reproducer support and the second brake member for applying the latter to the rotatable brake member when the reproducer support lifts the reproducer from coöperative relation with the record mandrel.

[Claims 6 to 14 not printed in the Gazette.]

1,203,668. MACHINE-GUARD. ARTHUR WEINS and JOSEPH H. P. J. ROESLER, Milwaukee, Wis. Filed Nov. 22, 1915. Serial No. 62,686. (Cl. 75—56.)



1. The combination, with a supporting table, a sewing machine mounted thereon, a line shaft beneath the table, and power-transmission mechanism operatively connecting said machine with said shaft, of a guard for said machine for inclosing its transmission mechanism beneath said table and a portion of said shaft including a casing slidably movable to a position beneath the table, and means for securing said casing in position.

2. The combination, with a power-operated sewing-machine-supporting table and a transmission mechanism disposed therebeneath, of a guard comprising an end plate secured to the table, and a three sided shell slidably movable to a position beneath the table into engagement with said plate, said plate and shell forming an inclosing casing for said mechanism.

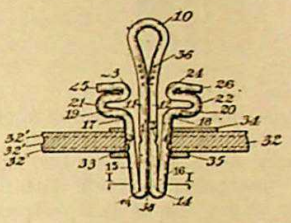
3. The combination, with a power-operated sewing-machine-supporting table and a transmission mechanism disposed therebeneath, of a guard comprising an end plate secured to said table and a side plate extending at an angle thereto and provided with a guideway, a three sided shell having a cut out portion in one side, said shell being slidably movable upon the floor to a position beneath the table, the upper edge of the cut out side being slidably movable in the guideway on said side plate, said plates and shell forming an inclosing casing for said mechanism.

4. The combination, with a power-operated sewing-machine-supporting table and transmission mechanism including a drive-shaft disposed therebeneath, of a guard comprising an end plate secured to the table, a three sided shell having slots in its opposite sides for slidably receiving the drive shaft, and slotted plates adjustably secured to said sides adjacent said slots.

5. The combination, with a power-operated sewing-machine-supporting table and transmission mechanism including a drive-shaft disposed therebeneath, of a guard comprising an end plate and a side plate extending at an angle thereto secured to said table, said end plate being provided with vertically disposed spaced-apart grooves and said side plate having a guideway in its lower edge, a three sided shell having a portion cut out from one side and a slot for receiving said shaft, said shell being slidably movable upon the floor to a position beneath the table with edges of its opposite sides disposed in the grooves of said end plate and the upper edge of the cut out side being slidably movable in the guideway on side plate, said plates and shell forming an inclosing casing for said mechanism.

[Claims 6 to 9 not printed in the Gazette.]

1,203,669. FASTENING DEVICE. ROBERT A. WHITESIDE, Beaver Falls, Pa., assignor of one-half to Alexander M. Neeper, Pittsburgh, Pa. Filed Sept. 29, 1914. Serial No. 864,079. (Cl. 85—10.)



1. A fastening device bent medially to form parallel members and said parallel members then bent back on themselves to form approximately parallel inner and outer members, said inner and outer members being weakened on their outer sides at approximately corresponding points intermediate their ends to define bending points.

2. A fastening device bent medially to form approximately parallel members connected at one end by a semicircular bend and said parallel members then bent back upon themselves to form approximately parallel inner and outer members, said inner and outer members being weakened at approximately corresponding points intermediate their ends to define bending points; said outer members being bent approximately at their ends to form outwardly extending bends therein.

3. A fastening device bent medially and then bent back upon itself to form therein approximately parallel inner members and outer terminal members, the parallel parts of which, adjacent to the bends connecting them, constitute the spreading ends of said device, said outer and inner members being formed, at approximately corresponding points intermediate their ends, for controlling and facilitating the spreading of said spreading ends.

4. A fastening device bent medially and then bent back upon itself to form therein approximately parallel inner members and outer terminal members, the parallel parts of which, adjacent to the bends connecting them, constitute the spreading ends of said device, said outer and inner members being formed, at approximately corresponding points intermediate their ends, for controlling and facilitating the spreading of said spreading ends, said outer terminal members being provided, approximately at their ends, with means integral therewith for preventing said device from passing through objects into which said device is driven.

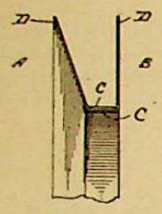
5. A fastening device bent medially to form a semicircular bend at its medial part, and members inclined in part and parallel in part; said members being bent back upon themselves to form inner and outer members, said outer members being inclined, said outer members bent approximately at their ends to form outwardly extending parts therein; said outer and inner members being weakened at approximately corresponding points intermediate their ends to define bending points.

[Claim 6 not printed in the Gazette.]

1,203,670. DUST-GUARD. LACEY Y. WILLIAMS, Toledo, Ohio. Filed Dec. 10, 1915. Serial No. 66,072. (Cl. 64—22.)

1. The combination with a journal box provided with a dust guard chamber with openings F and G, and a journal within said box, of a metallic dust guard having a circular flange engaging the journal and two flanges extended outwardly from said circular flange at substantially right angles thereto, said latter flanges engaging the vertical surfaces of the metal bounding the dust guard chamber and closing the opening F from the dust guard chamber to the interior of the box so dust cannot pass.

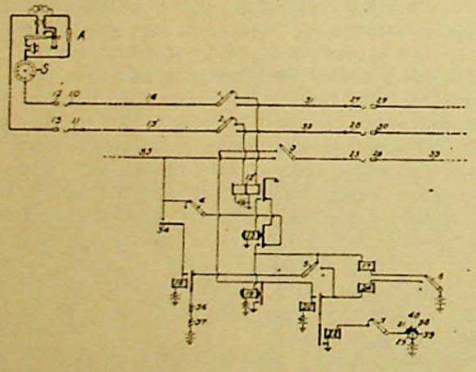
2. A dust guard of resilient metal having a circular flange to engage a journal, and two flanges extending outwardly around said circular flange one of said two flanges being slightly dished, for the purpose set forth.



3. A metallic dust guard of resilient metal comprised of two parts each having a circular flange and a flange extending outwardly from said circular flange, and the circular flange of one part disposed within the circular flange of the other part; one of said outwardly extended flanges being dished or at less than a right angle relative to the circular flanges.

4. The combination with a journal box provided with a dust guard chamber, of a metallic dust guard having an opening for a journal, said opening being bounded by a circular flange, a flange extending outwardly from and around said circular flange and frictionally bearing against the surface of the inner wall defining the dust guard chamber, and means forcing the last mentioned flange and holding it in contact with the surface of the wall, said latter means bearing against the surface of the outer wall of the dust guard chamber.

1,203,671. TELEPHONE-EXCHANGE SYSTEM. SAMUEL B. WILLIAMS, Jr., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 23, 1915. Serial No. 52,278. (Cl. 179—18.)

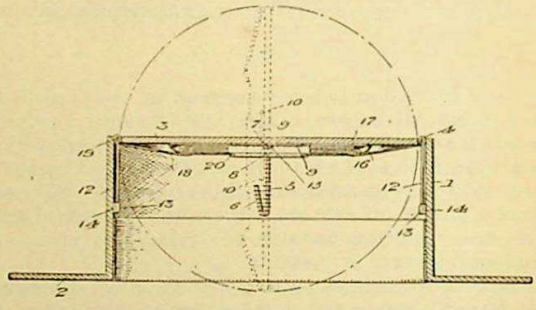


1. In a telephone exchange system, the combination with telephone lines, automatic switches to which said lines are multipled, primary and secondary stepping magnets for said switches, means controlled by said lines for operating said primary magnets, an interrupting machine adapted to operate said secondary magnets, a control magnet for each switch and a circuit therefor adapted to maintain the same energized while the primary magnet of such switch is operating and to be opened upon the conclusion of the operation of said magnet, of a locking circuit for said control magnet including an armature and front contact thereof and controlled by said interrupting machine, and a stepping circuit controlled by said machine and including the associated secondary magnet and the armature and back contact of said control magnet.

2. In a telephone exchange system, the combination with telephone lines, automatic switches to which said lines are multipled, primary and secondary stepping magnets for said switches, means controlled by said lines for operating said primary magnets, an interrupting machine adapted to operate said secondary magnets, a side switch for each of said automatic switches, an escapement magnet for said side switch, a circuit adapted to maintain the same energized while said primary magnet is operating and to be opened upon the conclusion of the operation of said magnet, of a locking circuit including an armature and front contact of said escapement magnet and controlled by said interrupting machine, and a stepping circuit controlled by said machine and including the associated secondary magnet and the armature and back contact of said escapement magnet.

3. In a telephone exchange system, the combination with telephone lines, automatic selector switches to which said lines are multipled, primary and secondary stepping magnets for each of said switches, a sender adapted to operate said primary magnets, an interrupting machine adapted to operate said secondary magnets, a side switch for each of said automatic switches, an escapement magnet for each side switch, a circuit therefor adapted to maintain the same energized during the operation of said primary magnet and to be opened upon the conclusion of the operation of said magnet, said magnet upon its de-energization advancing the side switch, of a locking circuit for said escapement magnet controlled by said interrupter, and a stepping circuit controlled by said machine and including the associated secondary magnet and the armature and back contact of said escapement magnet.

1,203,672. STRAW HAT. WILLIAM WILSON, Newark, N. J. Filed June 26, 1916. Serial No. 105,874. (Cl. 2—108.)



1. A hat provided with a complete relatively stiff crown adapted to be reversed as an entirety to bring its underside uppermost and vice versa.

2. A hat provided with a complete crown pivoted at one of its axes and adapted to be reversed as an entirety to bring its underside uppermost, and vice versa.

3. A hat having the top of its crown pivoted to the upright portion thereof and reversible on said pivotal connection.

4. A hat having a reversible crown provided with a waterproof cover.

5. A hat having a reversible crown provided with a waterproof cover which is adapted to be drawn over the hat when the crown is reversed.

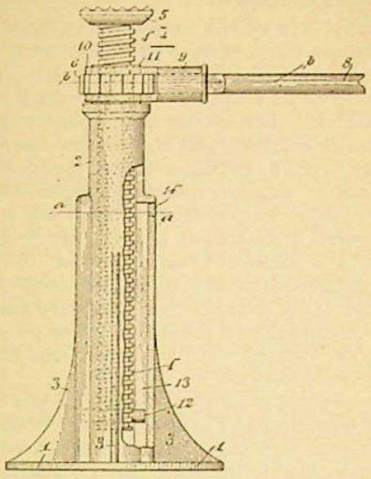
[Claims 6 to 8 not printed in the Gazette.]

1,203,673. LIFTING-JACK. THEODORE H. WITTLIFF and CHARLES W. PARKER, Dayton, Ohio, assignors, by direct and mesne assignments, to Fannie M. Wittliff, Waco, Tex. Filed Oct. 22, 1914. Serial No. 867,936. (Cl. 254—98.)

1. A lifting jack comprising a hollow standard having internal grooves in opposite walls, the standard being provided with an opening which intersects one of said grooves, a lifting bar movable in the standard, and a pin extending transversely of the lifting bar and operating at its ends in said grooves, said pin being adapted to pass through the opening of the standard and to be held against movement on the lifting bar by the bottom walls of the grooves.

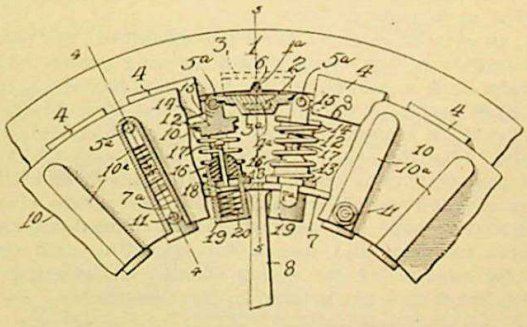
2. A lifting jack comprising a standard, a lifting bar movable in the standard and having a screw formed thereon, a ratchet nut engaging said screw, a member mounted

to turn relatively to the nut and having a non-circular socket, and a lever having a beveled end and a non-circular



portion to fit in said socket so that the beveled end will engage the ratchet nut in either of two positions.

1,203,674. RESILIENT WHEEL. CLINTON L. WOLFE, Brooklyn, N. Y. Filed May 25, 1915. Serial No. 30,348. (Cl. 152—8.)



1. A wheel comprising inner and outer rims, one of which is made up of a circumferential series of sections joined to permit radial flexibility, a series of radially acting resilient spacing means located between the rims, said spacing means comprising coil springs and pneumatic buffers concentrically placed; and alining plates overlying both rims; the joints between the sections embodying pintles parallel to the wheel axis; said resilient means being connected to the sectional rim through the medium of said pintles; said pintles being circumferentially interlocked with but radially movable on said alining plates.

2. A wheel embodying in its structure resiliently spaced inner and outer rims, and alining plates overlying said rims; said alining plates being constructed with inwardly presented radial grooves, said outer rim being constructed with lateral projections which enter and are radially movable in the outer portions of said grooves, said grooves being closed at their outer ends and adapted to limit the outward movement of said projections, and said inner rim being constructed with lateral lugs which enter and are fixed in the inner portions of said grooves.

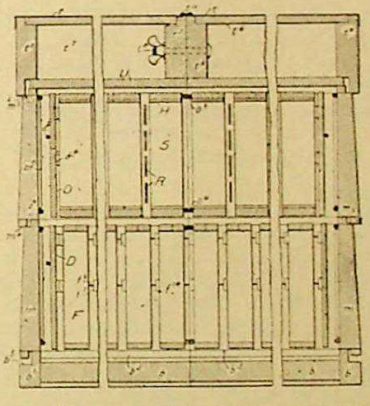
3. A wheel comprising in its structure a radially flexible sectional outer rim having pintles hinging its parts together and projecting laterally beyond the same, an inner rigid rim having laterally presented lugs, resilient spacing means interposed between the rims, said spacing means comprising coil springs and puenmatic buffers concentrically placed; and alining plates overlying said rims and having inwardly presented radial grooves fitting at their inner portions upon the lugs of the inner rim, and receiving the pintles with freedom of radial movement in their outer portions; said plates being bolted to the inner rim through said lugs.

4. In a resilient wheel comprising flexible and rigid rims, with a series of resilient spacing members between them; buffers embodied in said resilient members, said resilient members comprising coil springs, and said buffers being concentric with said springs; dash-pots also positioned concentric with said springs, pistons in said dash-pots having rods projecting into the paths of parts moving with the flexible rim, and said buffers surrounding said piston rods and serving as limit stops for the flexible rim.

5. In a resilient wheel comprising flexible and rigid rims, with a series of resilient spacing members between them; buffers embodied in said resilient members, said resilient members comprising coil springs, and said buffers being concentric with said springs; dash-pots also positioned concentric with said springs, pistons in said dash-pots having rods projecting into the paths of parts moving with the flexible rim, and said buffers surrounding said piston rods and serving as limit stops for the flexible rim, said dash-pots being constructed with seats for the springs.

[Claims 6 to 8 not printed in the Gazette.]

1,203,675. BEEHIVE. GEORGE P. WOOD, Peekskill, N. Y. Filed Aug. 17, 1915, Serial No. 45,948. Renewed Sept. 21, 1916. Serial No. 121,522. (Cl. 6—1.)



1. A hive-section comprising two opposite walls, said walls being united at their ends to fixed parts, at right angles thereto, to form a rectangular compartment with vertical walls for containing movable-frames, said fixed parts having an opening or openings whereby the hive-section is adapted for combination with one or more similar hive-sections in one story by having the corresponding fixed parts containing openings placed in juxtaposition in such manner as to provide communicating passages for the bees from one hive-section to another through same, and also adapted for combination with one or more similar hive-sections or combinations of similar hive-sections in more than one story by placing one over another, and detachable walls for the hive-section adapted for connection to form closed walls outside of the fixed parts containing an opening or openings, the main portion of each of the walls being wedge-shaped in cross section with greatest thickness at base whereby the base of hive-section will extend beyond the top of a like hive-section placed under same.

2. A beehive bottom consisting of a main board reinforced and adapted for use with hive-sections by means of cleats at its edges, one cleat or opposite cleats being detachable, whereby the bottom is adapted for combination with other like bottoms to accommodate a beehive of more than one hive-section per story, and means of rigidly uniting said combined bottoms.

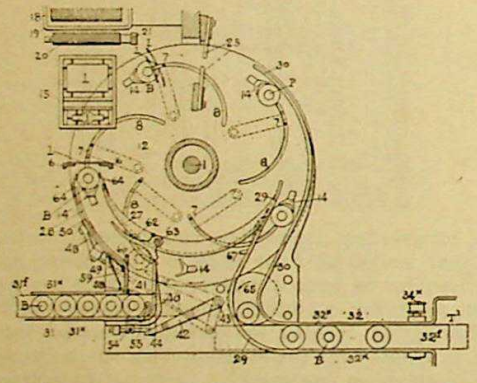
3. A beehive cover consisting of a top attached to a rectangular rim adapted for connection to the tops of hive-sections, said rim comprising one or opposite double sides, the outer parts of which are detachable, whereby the cover is adapted for combination with other like covers to accommodate a beehive of more than one hive-section per story, and means of rigidly uniting said combined covers.

4. A beehive comprising one or more bottoms adapted to be combined with like bottoms, one or more hive-sections corresponding to said bottoms and adapted to be combined with like hive-sections and one or more covers corresponding to said bottoms and hive-sections and adapted to be combined with like covers to form a beehive of more than one hive-section or part per story, each bottom, hive-section and cover being also adapted for use in the formation of a complete beehive of one hive-section or part per story by means of corresponding detachable parts adapted to form the outer ends or walls of hive parts when attached and to be omitted when like hive parts are united in one story, and means of fastening.

5. A hive-section comprising two opposite walls, fixed parts each consisting of horizontal and vertical bars and secured at right angles to the ends of said walls to form a rectangular compartment with vertical walls, detachable walls adapted for connection with and to form closed walls outside of the fixed parts, and a locating device for said detachable walls consisting of protruding parts attached to the said detachable walls in the right position to engage vertical grooves in the ends of the side walls of the hive-section between the horizontal bars of the fixed part of the hive-section.

[Claims 6 to 10 not printed in the Gazette.]

1,203,676. AUTOMATIC BOTTLE-FEED MECHANISM FOR LABELING-MACHINES. FRANK O. WOODLAND, Worcester, Mass.; Frances S. Woodland and Arthur F. Kelley, administrators of said Frank O. Woodland, deceased, assignors to Economic Machinery Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 16, 1915. Serial No. 2,746. (Cl. 193—1.)



1. In a feed mechanism for bottle labeling machines, in combination, a rotary carrier table having upright bottle pushing and centering rests fixed thereon, inner and outer stationary curved fenders forming upright walls adjacently above the carrier table and defining the path in which said pushing rests are carried, a feed-way having a traveling bottom, a transverse barrier and a lateral pass-way at the end of said feed-way; a horizontally swinging feeder-fork fulcrumed in line with the feed-way, its furcated end extending through the barrier into the pass-way and adapted for contact with a bottle and to move it along said pass-way, a catch device engageable with a lug on the feed-fork at its outward position, a bottle actuated means for releasing said catch, means for operating said feeder-fork including a spring for giving forward movement to said fork, and connections actuated by a cam-surface on the carrier for controlling the movement thereof.

2. In a machine for the purpose described, in combination, a rotary carrier having upright rests thereon for the support of bottles or the like at pre-determined intervals, stationary path-defining fenders adjacently above the carrier, a traveling-bed feed-way terminating with a laterally offset pass-way into the path of the carrier, a swinging feed-lever fulcrumed at a position beyond the barrier and in alinement with said feed-way, its free end extending through said barrier into the pass-way and adapted to swing across the end of said feed-way for forcing the foremost bottle from said feed-way to the carrier-path, and means for automatically arresting action of said feed-lever except when a bottle or the like is positioned in the feed-way at the pass-way.

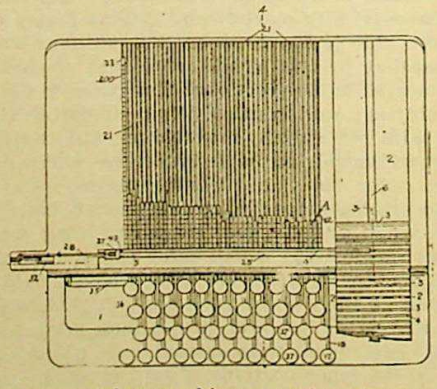
3. In a mechanism of the character described, in combination, with a rotary carrier provided with means for supporting and advancing bottles or the like, a feed-way comprising guides and a traveling conveyer, said feed-way provided with a terminal barrier and a pass-way from said conveyer to said carrier, and a movable feeding-in element adapted for transferring a bottle through said pass-way, of a detaining catch for said feeding-in element, said parts having counter engaging members that mutually interlock to prevent withdrawal of said catch, but are releasable by slight backward movement of the feeding-in element, means including a can carried upon said rotary carrier adapted for effecting such backward movement of said feeder-in element, and a catch-actuating member that contacts with the bottles when at or near the terminal end of the feed-way.

4. In a mechanism of the class described, a bottle-feeding device, comprising a swinging lever fulcrumed upon an upright axis-member, and having a furcatedly pronged end adapted for supporting and moving single bottles in upright relation, in combination with an in-coming feeding conveyer alined directly toward the fulcrum of said lever, but terminating with a transverse skeleton barrier and pass-way, through and along which the furcatedly pronged end of said feeding-device swings across the conveyer, a moving carrier that receives the bottles therefrom, means including cam surfaces upon said carrier for operating said feeding-devices, and means for controlling the instant of feeding action.

3. In a mechanism of the class described, the combination with a rotary carrier, path defining guards adjacent thereto, and a traveling-belt feed-way having a barrier and pass-way, of a swinging transferring-lever or arm provided with a hingedly connected end member adapted for moving a bottle or the like from said feed-way through said pass-way onto the carrier, said hinged end member being adapted to fold inward during the return stroke of said arm, means for returning said hinged member to normal relation, and means for operating said carrier, and for controlling the action of said transferring lever.

[Claims 6 to 9 not printed in the Gazette.]

1,203,677. TYPE-SETTING MACHINE. WALTER WRIGHT, San Francisco, Cal. Filed Sept. 4, 1906. Serial No. 333,248. (Cl. 101—195.)



1. In a type setting machine, a series of type channels, a track for the type extending past the ends of the channels, comprising a wall on one side thereof, mechanism for advancing the type in each channel, mechanism for advancing along the track a type discharge thereon from a channel, and means for actuating said mechanisms in the above order in a single operation, comprising a key lever, for each channel, a universal bar actuated by each lever when depressed a suitable distance, a pusher engaging said wall and having a keeper pin to form the other side of the track, and an operative connection between the universal bar and the pusher, substantially as described.

2. In a type setting machine, a track for the type comprising a wall on one side thereof and a pusher along the track having a keeper pin adapted to engage the type on the side opposite said wall, substantially as described.

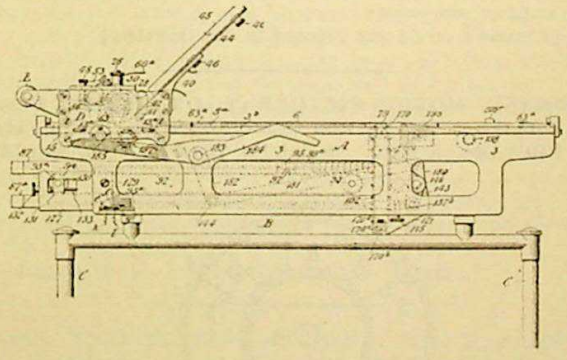
3. In a machine in which type is moved from one point in the machine to another, a type holder, a type receiver, a passage between the holder and receiver, said holder, passage and receiver being in the same horizontal plane and an advancing device moving in said passage and having a retractile member for holding the type against lateral movement while advancing.

4. In a type setting machine, the combination with a magazine having a plurality of type channels terminating on a track-way open thereto and a type form at the end of said track-way all being in the same horizontal plane, of an advancer adapted to traverse said track-way, means combined therewith for engaging a type on the side adjacent to the channels, said means being retractile at the type form, and means for advancing the type form from one channel therein to another.

5. The combination of a holder having a plurality of parallel channels for type all disposed in the same horizontal plane, keys corresponding to the channels, means for advancing type in said channels and discharging the foremost type therefrom, a track-way transverse of said channels, said track-way having a member adapted to engage with type discharged thereupon, a pusher engaging with discharged type and adapted to advance the same along the track-way, a retractile member combined with said pusher adapted to maintain type on said track-way, and means combined with the keys for operating said pusher.

[Claims 6 to 43 not printed in the Gazette.]

1,203,678. PRINTING-MACHINE. WALTER WRIGHT, New York, N. Y., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 27, 1910. Serial No. 589,405. (Cl. 101—1.)



1. In a printing machine for the purpose described, a chase holding a main type surface, a printing or pressure roll coacting therewith to print by rolling pressure thereon, delivery and receiving trays removably supported by the machine and adapted each to interlock with a series of independent form-holders, means for successively removing holders from said delivery tray and conducting and seating the same in the printing plane of said main type surface, whereby the impression may be taken from the latter and said seated holder in one operation, and means for introducing said holders, after the impression, into said receiving tray.

2. In a printing machine for the purposes described, having in combination a bed or table, a chase for holding the type forming the matter to be impressed, an inking ribbon disposed above and movable over the face of the type, a carriage having a printing or pressure roll adapted to revolve upon and over the type, means for throwing said printing or pressure roll into and out of operative position, means comprising removable magazine trays adapted respectively to contain type-surface holders to be delivered to the machine and to receive said holders as they are ejected therefrom, and means for automatically and successively moving said type holders from the one removable magazine tray through the bed into printing position in alinement with the chase and for thereafter ejecting them into the other magazine tray.

3. In a printing machine for the purposes described, having in combination a bed or table, a removable chase for holding the type forming the matter to be impressed, a carriage having a printing or pressure roller adapted to be moved over and revolved upon the type, adjustable bearings for said roller having spring cushions thereunder, means for throwing said roller into and out of operative position, portable containers constituting magazine trays adapted respectively to contain name and address holders to be delivered to the machine and to receive the name and address holders as they are ejected therefrom, and means for automatically and successively moving said name and address holders directly from the one magazine tray through the bed into printing position and for thereafter ejecting them into the other magazine tray.

4. In a printing machine for the purposes described, having in combination a bed or table, a type-holding chase for containing the matter to be impressed, an auxiliary holder for containing the date, a name and address mechanism disposed between them, a carriage having a printing or pressure roller adapted to be revolved over and upon the type, means for throwing said printing or pressure roller into and out of operative position, magazine trays adapted respectively to contain name and address holders to be delivered to the machine, and to receive the same after ejectment therefrom, and means for imparting intermittent motion to the name and address mechanism whereby the holders are successively brought into printing position.

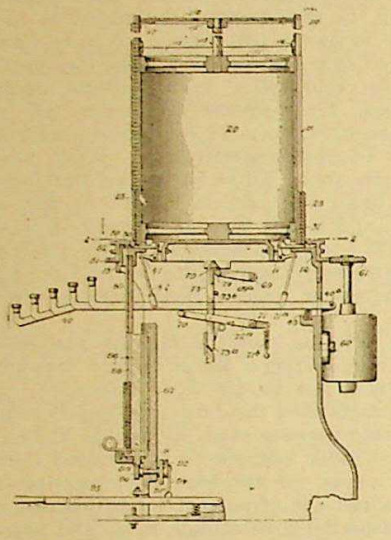
5. In a printing machine for the purposes described, having in combination a bed or table, a type-holding chase for containing the matter to be impressed, an auxiliary holder for containing the date, a name and address mechanism disposed between them, a carriage having a printing or pressure roll adapted to be revolved over and upon the type, means for throwing said printing or pressure roll into and out of operative position, magazine trays, adapted, respectively, to contain name and address holders to be delivered to the machine and to receive the same after ejectment therefrom, means for imparting motion to the name and address mechanism, whereby the holders are successively brought into printing position, and means for afterward ejecting them from the machine.

[Claims 6 to 51 not printed in the Gazette.]

1,203,679. TYPE-SETTING MACHINE. WALTER WRIGHT, New York, N. Y. Filed May 25, 1911. Serial No. 629,394. (Cl. 101—196.)

1. A type-setting machine comprising a type magazine having channels containing type lying flatwise, the said type having guide grooves in opposite sides in which the side walls of the magazine channels are received, and having a third groove across another side of the type, the said machine having a bed presenting a flat surface on which the lowermost types in the channels rest, a type assembling device, the said bed having an outlet extending downward therefrom and forming a throat leading to the assembling device, a barrier at said outlet forming a stop for the type, the said barrier and the opposite side wall of the outlet presenting members corresponding with the side recesses in the types, the mentioned flat surface of the bed extending around the magazine and on a plane with said outlet, key-operated ejectors having each a member received in one of the side recesses of said lowermost types, type-advancing means in the form of a yieldingly mounted pin traveling around the magazine and over the throat of the assembling device, the mentioned ejectors delivering the type into the path of travel of the said type-advancing means, and a vertically shiftable type-controlling device extending around the said path and having a member so positioned thereon as to enter the mentioned third groove in a type after the latter is moved outward by an ejector, connections between the keys and the type-controlled device to lift the latter, the yieldingly

mounted pin having a riding movement over the barrier and over an arrested type and constituting a forcible ejector to discharge the type into the throat leading to the assembling device.



2. A type-setting machine comprising a type magazine, an annular traveler continuously revolving around the magazine in a fixed path, ejectors movable outwardly from the magazine below the path of said traveler, said ejecting means also constituting a means of control for the type until the latter is engaged by said traveler and means for raising said traveler coincident with ejecting the type.

3. A type-setting machine comprising a base having a discharge for type, a type magazine on said base, ejectors operable to eject type outwardly from the magazine, and type advancing means to which the ejectors deliver the type above the plane of type delivery, the ejectors being provided with type controlling means movable transversely in the path of said type advancing means.

4. A type-setting machine comprising a magazine for type, a base upon which the type rest, said base extending annularly beyond the magazine, radially disposed ejectors operable to eject type horizontally away from the magazine, and rotary type-conveying means traveling around the magazine, said base having an outlet conforming to the profile of the type and leading directly downward from the path traversed by said type-conveying means.

5. In a machine in which type is moved from one point to another, a stationary path along which the type travel, type-conveying means traveling over said path, type controlling means also traveling in said path and a type receiving throat in said path, said throat having walls conforming to the profile of the type.

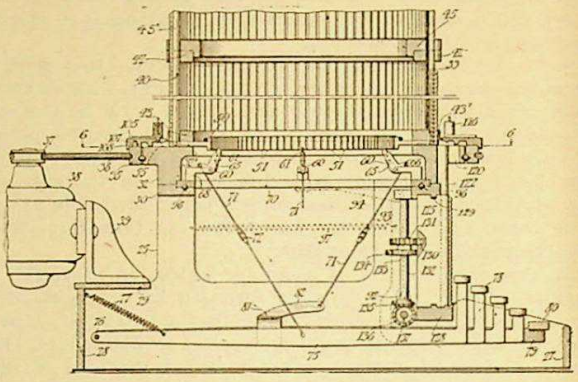
[Claims 6 to 89 not printed in the Gazette.]

1,203,680. TYPE-SETTING MACHINE. WALTER WRIGHT, New York, N. Y. Filed Feb. 28, 1913. Serial No. 751,325. (Cl. 101—196.)

1. A typesetting machine comprising a magazine of type channels, ejector means for the type therein, a race through which the ejected type are moved and a discharge passage therefrom to a place of composition, in combination with a member yielding to the type ejected into the race and coöperating with the associated race-forming parts to maintain the relative position of said type during its transfer through the race.

2. A typesetting machine comprising a series of type channels, ejector means for the type therein, a race through which ejected type are transferred, and a discharge from the race, the said race comprising a yielding member normally closing the same and formed with a type-engaged face by means of which it is displaced to receive the entering type.

3. A typesetting machine comprising in combination with a series of type channels having ejector means for the type therein, a race for transferring the ejected type, said race being formed between upper and lower surfaces, one of said surfaces being rotary and adapted to propel the ejected type through the race, and one of said surfaces having alining engagement with the type to preserve its relative position while within the race, and means whereby the type ejected into said race displaces one of said surfaces in moving into the said alining engagement.

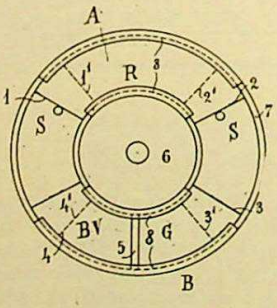


4. A typesetting machine comprising a magazine of type provided with ejecting means, a race and a discharge from the race to a point of composition, in combination with a rotary-ring form member having yielding driving engagement with the type and mounted to be displaced from its normal plane of rotation by relative movement between the type and itself.

5. A typesetting machine comprising a supply of type and means for selectively ejecting the same, a race through which ejected type are moved and a discharge from the race, said race comprising opposite surfaces one of which is formed on a rotary or revolving member, and an actuating supporting element for said member with respect to which the said surface is movable out of its normal plane or path of movement.

[Claims 6 to 33 not printed in the Gazette.]

1,203,681. MOTION-PICTURE COLOR-FILTER. ERNEST ZOLLINGER and SIMON MISCHONSNIKY, Turin, Italy. Filed Dec. 2, 1912. Serial No. 734,549. (Cl. 88—16.4)

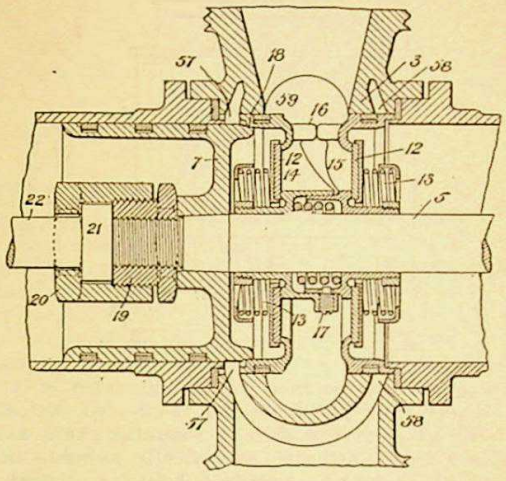


In a motion picture apparatus, means comprising a plurality of color filter areas adapted to pass successively across the path of light, at least one of said areas consisting of a group of adjustable, different color filters, so as to permit a relative variation of area between the filters of said group.

1,203,682. PUMP, ENGINE, AND THE LIKE. JEAN ZWICKY, South Tottenham, England. Filed Feb. 11, 1915. Serial No. 7,610. (Cl. 103—77.)

1. A pump or fluid motor comprising in combination two working cylinders in axial alinement, a separate detachable casting uniting said cylinders and having an interior cylindrical face formed with ports completely around its circumference, a cylindrical valve member moving on said interior face and coöperating with the ports, pistons sliding in said cylinders, and a piston rod connecting said pistons.

2. A pump or cylinder comprising in combination a pair of working cylinders in axial alinement, a cylindrical valve chamber separating the said cylinders and having a ported inner cylindrical surface larger in diameter than said cylinders, a piston valve in said valve chamber cooperating with said interior surface, a piston in each of said cylinders, and a piston rod connecting said pistons.



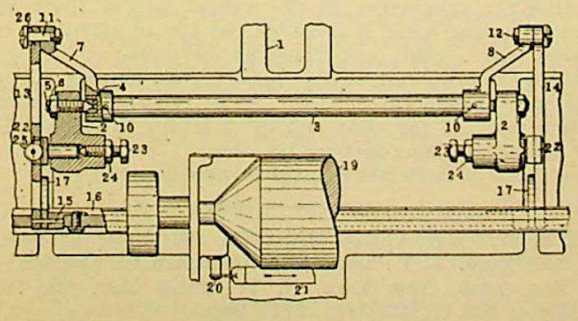
3. A pump or fluid motor comprising in combination two working cylinders in axial alinement, a valve chamber separating said cylinders and provided with an interior cylindrical surface having a ring of ports completely around its circumference, a cylindrical piston valve sliding on said inner surface and coöperating with said ports, pistons in said cylinders and a piston rod connecting said pistons.

4. A water meter comprising two cylinders in axial alinement, a ported surface located between said cylinders and connected with inlet and outlet channels, a valve member located within said surface and controlling its ports, and means for causing said valve member to be completely thrust over and brought into operation when the valve member is moved through half of its travel.

5. A suction pump comprising two cylinders in axial alinement, a ported surface located between said cylinders connected with inlet and outlet channels, a piston in each cylinder, a piston rod joining said pistons, a valve member within said surface controlling its ports, and a one-way valve located between the inlet channel and each cylinder.

[Claims 6 to 15 not printed in the Gazette.]

1,203,683. TYPE-WRITING MACHINE. NILS H. ANDERSON, Middletown, Conn., assignor to The Noiseless Typewriter Company, Middletown, Conn, a Corporation of Connecticut. Filed June 12, 1914. Serial No. 844,659. (Cl. 197—72.)



1. In a typewriting machine, in combination, a fixed part, an arm pivoted thereon, a movable part, a link pivotally connected therewith, said arm and link having their ends pivotally connected, and ball bearings associated with said pivotal connections, said link acting as a lever and having a rolling fulcrum.

2. In a typewriting machine, in combination, a fixed part, an arm pivoted thereon, a movable part, a link pivotally connected therewith, said arm and link having their ends pivotally connected, and ball bearings associated with said pivotal connection, one of said pivotally connected parts acting as a lever and having a rolling fulcrum.

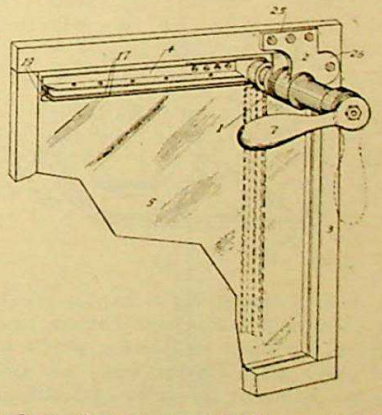
3. In a typewriting machine, in combination, a fixed part, an arm pivotally connected therewith, a movable part, a link pivotally connected with said movable part and said arm and being supported intermediate its ends on said first part, said means of support being a grooved trunnion in which said link has a longitudinal movement, and a roller associated with one of said last-mentioned parts to permit freedom of movement.

4. In a typewriting machine, in combination, a fixed support, adjustable trunnions in said support, adjustable trunnion screws in said support, a shaft supported by said trunnion screws, a shift rail, and linkage between said shaft and said shift rail, a part of said linkage adapted to have a longitudinal movement in said trunnions as said shift rail is moved.

5. In a typewriting machine, in combination, a relatively fixed support, trunnion screws mounted thereon, a shaft between said screws, arms mounted on said shaft, links pivotally connected with the ends of said arms and extending rearwardly of the machine, a shift rail to which opposite ends of said links are pivotally connected, and means for shifting said shift rail, said links being adapted to have a longitudinal movement when said shift rail is actuated.

[Claims 6 to 10 not printed in the Gazette.]

1,203,684. WINDOW-CLEANER. JOSEPH RENÉ AYOTTE, Chicago, Ill., assignor to René Squeegee Company, Chicago, Ill., a Corporation of South Dakota. Filed Dec. 17, 1915. Serial No. 67,414. (Cl. 15—59.)



1. A window cleaner, comprising a bearing, a shaft mounted therein so as to rotate and also shift axially, a squeegee carried by one end of said shaft, a journal on said one end of said shaft fitting within said bearing, a handle connected to the other end of said shaft, a hub on said handle fitting within said bearing so as to provide a journal for the other end of said shaft, said bearing having an annular space around said shaft intermediate said journals so as to provide for the retention of a lubricant, and a spring embracing said shaft intermediate said journals and normally urging said squeegee into a retracted position.

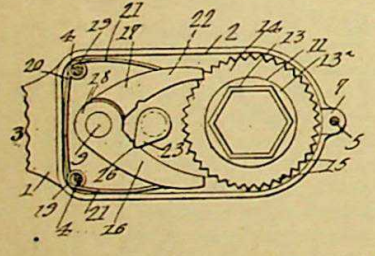
2. A window cleaner, comprising a bearing, a shaft mounted therein so as to rotate and also shift axially, a squeegee carried by one end of said shaft, a journal on said one end of said shaft fitting within said bearing, a handle connected to the other end of said shaft, a hub on said handle fitting within said bearing so as to provide a journal for the other end of said shaft, said bearing having an annular space around said shaft intermediate said journals so as to provide for the retention of a lubricant, and a spring embracing said shaft intermediate said journals and normally urging said squeegee into

a retracted position, said bearing having an aperture communicating with said annular space so as to allow for the admission or escape of air from said space when said shaft is shifted axially.

3. A window cleaner, comprising a bearing, a shaft journaled in said bearing and shiftable axially, a squeegee carried on one end of said shaft, a handle attached to the other end of said shaft for shifting said shaft to move said squeegee into contact with the glass of the window on which said cleaner is mounted and swinging said squeegee to clean the same, and a spring normally urging said squeegee into a retracted position out of contact with the glass, said bearing and handle having a coacting shoulder and recess for locking said squeegee in a certain angular position, said shoulder being arranged to coact with said bearing when released from said recess for permitting said squeegee to be held out of contact with the glass when it is swung from said certain position into position for cleaning the window.

4. A window cleaner, comprising a bearing, a shaft journaled in said bearing and shiftable axially, a squeegee carried on one end of said shaft, a handle attached to the other end of said shaft for shifting said shaft to move said squeegee into contact with the glass of the window on which said cleaner is mounted and swinging said squeegee to clean the same, a spring normally urging said squeegee into a retracted position out of contact with the glass, and a pin on said handle, said bearing having a recess therein for receiving said pin and locking said squeegee in a certain angular position, said pin being arranged to coact with said bearing when released from said recess for permitting said squeegee to be held out of contact with the glass when it is swung from said certain position into position for cleaning the window.

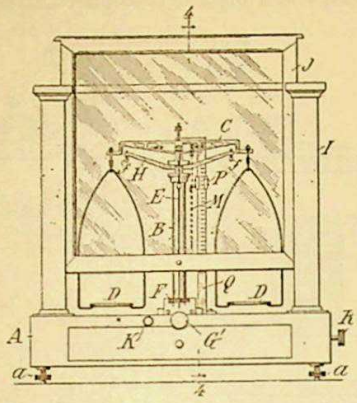
1,203,685. REVERSIBLE RATCHET-WRENCH. CHARLES BAKER, Bloomsburg, Pa. Filed Sept. 11, 1915. Serial No. 50,133. (Cl. 81—62.)



A ratchet wrench embodying a handle provided at one end with an elongated case whose bottom has a circular opening adjacent its outer end and a pintle adjacent its inner end, a cover plate closing said case and having a circular opening adjacent its outer end alining with the first mentioned opening, a pair of securing elements fastening the inner end of the cover to the bottom of the case at the inner corners of the case, a rotatable member journaled through said openings and having an enlarged toothed collar disposed snugly between the bottom of the case and the cover plate, a pair of outwardly projecting pawls coöperable with said collar and having overlapped butts pivoted upon said pintle, a U-shaped wire spring within the case having coils at its bends surrounding said securing elements, the arms of the spring projecting outwardly under the pawls and the ends of the spring extending upwardly into the pawls to swing them into engagement with said collar.

1,203,686. WEIGHING-SCALE. CHRISTOPHER A. BECKER, New York, N. Y., assignor to The Torsion Balance Company, New York, N. Y., a Corporation of New York. Filed June 23, 1915. Serial No. 35,789. (Cl. 73—3.)

1. In a scale or balance, the combination of a scale beam, means whereon said beam is pivoted including a supporting base for the scale, a weighing chain hanging at one end from the beam, a vertically movable slide to which the other end of the chain is hung, an upright guide for the slide, a shaft rotatably supported on the base, and provided with an operating handle at one side of the base, and means controlled by said shaft for operating the slide and including a rotatable member extending from the base parallel to the guide.



2. In a scale or balance, the combination of a scale beam, means whereon said beam is pivoted including a supporting base for the scale, a weighing chain hanging at one end from the beam, a vertically movable slide to which the other end of the chain is hung, an upright guide for the slide, a shaft rotatably supported on the base, and provided with an operating handle at one side of the base, and means controlled by said shaft for operating the slide and including a member extending from the base parallel to the guide, and having screw-threaded connection with the slide.

3. In a scale or balance, the combination of a scale beam, means whereon said beam is pivoted including a supporting base for the scale, a weighing chain hanging at one end from the beam, a vertically movable slide to which the other end of the chain is hung, an upright guide for the slide, and means for operating the slide including a rotatable operating handle adjacent the base and an upright rod operatively connected to said handle and extending from the base parallel to the guide, said rod having a spiral groove, and means connected to said slide engaging said groove.

4. In a scale or balance, the combination of a scale beam, a case inclosing the same, a weighing chain entirely within the case hung at one end from the beam and adjustable at its other end to vary the proportion of its length which shall be carried by the beam, means for indicating the proportion of the weight of the chain supported by the beam, and means operable from outside the case for effecting such adjustment.

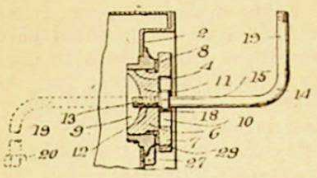
5. In a scale or balance, the combination of a scale beam, a case inclosing the same, a weighing chain hung at one end from the beam, a slide to which the other end of the chain is hung, an upright guide for said slide, said guide and slide having reciprocal graduations for indicating the proportion of the weight of the chain supported by the beam, a threaded rod for adjusting it, said chain, slide, guide and threaded rod being all inclosed within the case, and means operable from outside the case for turning said threaded rod, so as to effect a balancing adjustment of the slide and to maintain it at the point of balance without opening the case.

[Claims 6 to 10 not printed in the Gazette.]

1,203,687. METALLIC BARREL. WILLIAM E. BEMIS, New York, N. Y., assignor to Standard Oil Company of New York, New York, N. Y. Filed Mar. 19, 1915. Serial No. 15,419. (Cl. 217—98.)

1. A barrel having a head provided with a vent bung-hole, a vent plug adapted to be mounted detachably within the bung-hole and having a vent therein, a vent tube adapted to have one end thereof engaged within the vent of the said plug, the said tube being reversible in position upon the plug, and discharging means for the barrel.

2. A barrel having a head provided with a vent bung-hole, a vent plug adapted to be mounted detachably within the bung-hole and having a vent therein, a vent tube adapted to have one end thereof engaged within the vent of the said plug, the said tube being reversible in position upon the plug, means for closing the said tube when in one of its positions, and discharging means for the barrel.



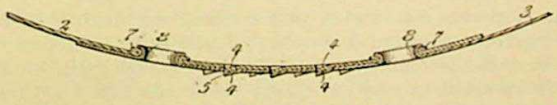
3. A barrel having a head provided with a vent bung-hole, a vent plug adapted to be mounted detachably within the bung-hole and having a vent therein, a vent tube adapted to have one end thereof engaged within the vent of the said plug, the said tube being reversible in position upon the plug, the free end portion of the said tube being provided with an angular extension adapted to project radially with respect to the barrel and discharging means for the barrel.

4. A barrel having a head provided with a vent bung-hole, a vent plug adapted to be mounted detachably within the bung-hole and being provided medially with a threaded opening, a vent tube having one of its ends threaded and adapted to be mounted reversibly within the said opening of the plug, and discharging means for the barrel.

5. A barrel having a head provided with a vent bung-hole, a vent plug adapted to be mounted detachably within the bung-hole and being provided medially with a threaded opening, a vent tube having one of its ends threaded and adapted to be mounted reversibly within the said opening of the plug, the threaded end of the tube being adapted to protrude through the plug in either position, a closure cap adapted to be threaded onto the protruding end of said tube, and discharging means for the barrel.

[Claims 6 and 7 not printed in the Gazette.]

1,203,688. BARREL-HOOP. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y., a Corporation of New York. Filed May 29, 1915. Serial No. 31,164. (Cl. 217—91.)

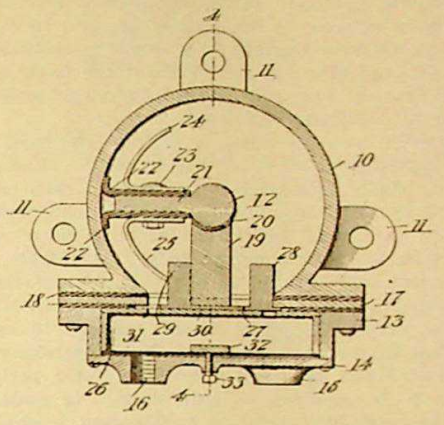


A barrel hoop constructed of a strip of sheet metal having its ends overlapping and united by means which comprise coöperating lips projecting laterally from the ends of said strip and each lip being struck from the stock of said strip so that the rear end of the lip is attached to the strip while its front end is deflected from the side of the lip and forms a forwardly facing edge on the lip and a rearwardly facing edge on the strip adjacent to the front end of the lip, and said lips lying against each other with the forwardly facing edge of the lip in one of said strip ends engaging throughout its width with the rearwardly facing edge of the other strip end.

1,203,689. HYDRAULIC MOTOR. DAVID W. BLUNT, South Cle Elum, and CHARLES L. KELSO, Cle Elum, Wash. Filed Jan. 14, 1915. Serial No. 2,160. (Cl. 138—1.)

1. In a hydraulic motor, the combination with a cylinder and operating parts, of a separate water chest which receives the inlet and outlet water, and slide valves between the water chest and the cylinder governing the inflow and outflow.

2. In a hydraulic motor, the combination with a cylinder and operating parts, of a water chest, valves between the cylinder and the water chest, a valve seat, a skeleton frame lying within the water chest and adjusting screws engaging the frame to regulate the position of the valve seat.

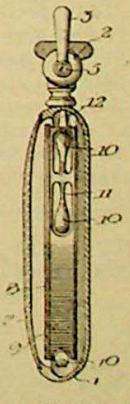


3. In a hydraulic motor, the combination of a cylinder, a central partition dividing the cylinder into chambers, slide valves governing the inlets and outlets to the cylinder and having projecting arms on opposite sides, a shaft, and a piston-wing projecting from the shaft and carrying valve operating wings for engaging the arms of the valve.

4. In a hydraulic motor, the combination with a cylinder and operating piston, of a pair of slide valves having projecting parts against which the piston operates, one of the valves having an imperforate base, the other valve having a perforated base so that when the piston strikes against the projecting arms to slide the valves an orifice will be opened on one side and closed at the other side.

5. In a hydraulic motor, the combination with a cylinder and operating parts, of a water-chest divided into chambers, valves between the cylinder and the water-chest, a valve-seat, a frame lying within the water-chest and supporting the valve-seat, and an adjusting screw operating upon the frame to provide for wear and tear.

1,203,690. HOROLOGICAL INSTRUMENT. HELGE A. BORRESEN, Marquette, Mich., assignor to Max W. Zabel, trustee, Chicago, Ill. Filed Apr. 14, 1911. Serial No. 620,965. (Cl. 58—88.)



1. A watchcase providing a resilient movement support, said movement support comprising a recessed circular band adapted to engage and support a watch movement and the said circular band having extending spring members, the said spring members engaging the interior periphery of the aforesaid watchcase, the said interior periphery having coincident lugs coöperating with the said extending spring members for preventing rotary action.

2. A watchcase providing a resilient movement receptacle, comprising a circular band having perforations producing spring members and providing spaces for universal resilient action of the said spring members, the said spring members engaging the interior periphery of said watchcase, said interior periphery having definitely located

lugs for engaging the aforesaid spring members so as to maintain the aforementioned resilient movement receptacle in a definite relation to the stem.

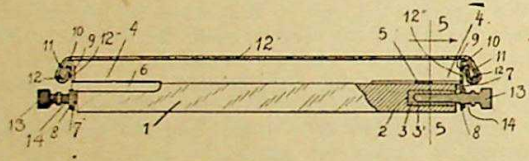
3. A watch case providing a resilient movement receptacle, comprising a circular band, a single row of circumferentially arranged spring fingers secured to said band, said spring fingers engaging the inner periphery of said watch case, and stops provided about the inner periphery of said case to be engaged by said fingers to maintain the said band in a definite relation to the stem.

4. A watch case providing a resilient movement receptacle, comprising a circular band, and a single row of circumferentially arranged spring fingers secured to said band, said spring fingers engaging the inner periphery of said watch case, said fingers having portions of restricted cross section to make them universally yieldable.

5. A watch case providing a resilient movement receptacle, comprising a circular band, a single row of circumferentially arranged spring fingers secured to said band, said spring fingers engaging the inner periphery of said watch case, stops provided about the inner periphery of said case to be engaged by said fingers to maintain the said band in a definite relation to the stem, winding means for said movement, and winding means provided in said case having means to universally engage the winding means of the movement.

[Claims 6 to 9 not printed in the Gazette.]

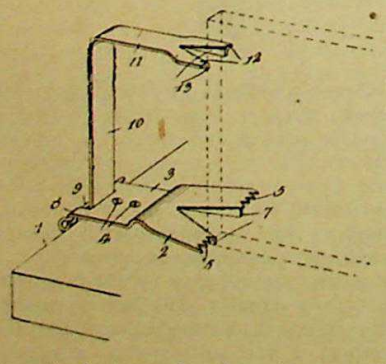
1,203,691. COMBINATION RAZOR STROP-HONE. KARL BRÄCHER, Jr., Belleville, N. J. Filed Apr. 29, 1915. Serial No. 24,731. (Cl. 51—16.)



1. In a device of the character described, a hone, a strop, members having a flat body portion, a flange, and a stamped out portion arranged at right angles to said body portion, said members arranged adjacent each end of the hone for supporting the strop, and means associated with said hone and operatively connected to the members for adjusting the said members thereby tensioning the strop.

2. In a device of the character described, a hone, a strop, members having a body portion and a web, the latter being bent upon itself and arranged at right angles to said body portion, said web having a plurality of teeth adapted to securely hold the strop within said bent portion, said members slidably arranged adjacent each end of the hone for supporting the strop, and an adjusting screw associated with the hone and said members thereby constituting a means for adjusting the strop.

1,203,692. BENCH-CLAMP. JAMES M. BRILES, Victoria, Tex. Filed June 24, 1914. Serial No. 847,063. (Cl. 144—306.)



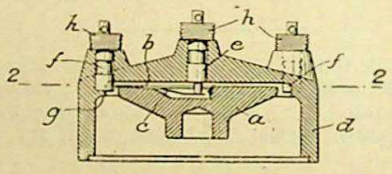
1. In a bench clamp, a bench, a lower work grip anchored to the bench for engaging the work at the surface of the bench, an upper grip hinged to the bench for engaging the work at a point above the surface grip, and means for locking the upper grip to the lower grip and disposing the upper grip in an operative position, substantially as described.

2. In a bench clamp, a bench, a lower grip formed of sheet metal and anchored to the bench and provided with a toothed edge and a bifurcation extending from the toothed edge, a sheet metal upper grip hinged to the bench and provided with a bifurcated portion adapted to be disposed in vertical alinement with the bifurcated portion of the lower grip, and means for locking the upper grip in an operative position and to the lower grip, substantially as described.

3. In a bench clamp, a bench, a lower grip anchored to the bench and provided with means for engaging the work at the surface of the bench and having butts extending from the bench, an upper grip hinged to the bench and adapted to be moved into an operative position between the butts of the lower grip, and a pin extending through the butts of the lower grip and engaging the upper grip to hold the latter in an operative position, substantially as described.

4. In a bench clamp, a bench, a lower grip having a flat portion anchored to the bench and a grip portion elevated with respect to the surface of the bench and bifurcated to form a work-grip jaw, the bifurcated portion being flanged to fit the same and provide a relatively wide area for grip of the work, an upper grip hinged to the bench and provided with a flange bifurcated portion adapted to be disposed above the bifurcated portion of the lower grip, and means for locking the upper grip in an operative position, substantially as described.

1,203,693. ELECTRIC-CURRENT DISTRIBUTER. WILLIAM C. BRINTON, Jr., Kennett Square, Pa., assignor to Philips-Brinton Company, Kennett Square, Pa., a Corporation of Pennsylvania. Filed Sept. 10, 1915. Serial No. 49,994. (Cl. 123—167.)



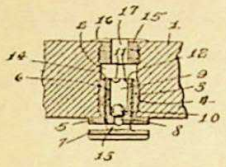
1. A device for closing and opening an electric current successively through a number of binding posts, comprising a cap having a top and a circular side wall, binding posts inserted in and extending below the top, a rotatable member within the cap, and a circuit terminal carried by the rotatable member and whose outer extremity is in its rotation brought successively into circuit-closing relation with, but spaced from, the inner surfaces of the posts above their lower ends, there being free spaces above and below said outer extremity, whereby displacement of the axis of the rotatable member will not affect the circuit closing relation between the circuit terminal and the posts.

2. A device for closing and opening an electric current successively through a number of binding posts, comprising a holder, a rotatable member within the holder, a distributing plate carried by the rotatable member, posts arranged in a line concentric with the axis of the rotatable member, the upright surfaces of the posts opposite the outer edge of the distributer plate in the latter's rotation being roughened to insure the closing of the circuit over the space between said plate and the respective posts.

3. A device for closing and opening an electric current successively through a number of binding posts, comprising a cap, a rotatable head within the cap, a recess in the top of the head, a distributer plate secured to the top of the head, a spring contacting with the plate and extending into said recess, a common terminal post carried by the cap and extending into said depression in contact

with said spring, and binding posts carried by the cap and arranged to be brought successively into circuit-closing relation with said plate in the rotation of said head.

1,203,694. SHOE-VENTILATOR. ROY F. BROWER, Syracuse, N. Y. Filed June 21, 1916. Serial No. 105,010. (Cl. 36—3.)



1. A shoe ventilator comprising a part insertible in one end of a perforation in a shoe, and formed with an inlet passage having a check valve therein, and a part insertible in the other end of the perforation and having a passage therethrough, the latter part preventing the perforation in the shoe from closing, substantially as and for the purpose described.

2. A shoe ventilator comprising a part insertible in one end of a perforation in a shoe and formed with a head at its outer end and with an inlet passage, having a check valve therein, said passage terminating short of the outer face of the head and having a lateral branch opening through the sides of the part in the rear of the outer face of the head, substantially as and for the purpose set forth.

3. In a shoe ventilator, a part insertible in one end of a perforation in a shoe, said part comprising a cylindrical casing having an annular flange at its outer end, and a plug threading into the casing and having a head at its outer end opposed to the flange, and an inlet passage provided with a check valve therein, said passage terminating short of the outer face of the head and having a lateral branch opening through the side of the plug in the rear of the head, substantially as and for the purpose described.

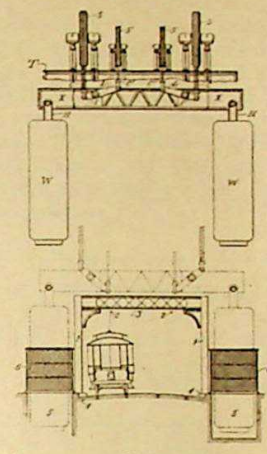
4. In a shoe ventilator, a part insertible in one end of a perforation in a shoe, said part consisting of a cylindrical casing having an annular flange at its outer end, and a plug threading into the casing and having a head at its outer end opposed to the flange, said plug being formed with an inlet passage having an enlargement at its inner end, the bottom of the enlargement constituting a valve seat, and a check valve in the enlargement coacting with the valve seat, said plug being formed with a shoulder located at the outer end of the enlargement in position to partly close the same for preventing removal of the valve, the inlet passage terminating short of the outer face of the head, and having a lateral branch opening through the sides of the plug in the rear near the head thereof, the upper portion of the screw threads on the plug being mutilated to prevent entire removal of the same when the inlet passage is opened, substantially as and for the purpose specified.

1,203,695. BASCULE-BRIDGE. THOMAS E. BROWN, New York, N. Y. Filed May 22, 1915. Serial No. 29,815. (Cl. 14—36.)

1. The combination in a movable bridge of counterweights, counterweight connections and a girder supporting said counterweights on said connections, said girder being extended beyond the planes of the trusses and having the points of support of said counterweights outside of the planes of the trusses of said bridge.

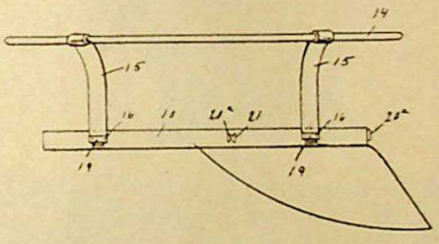
2. The combination with a movable bridge of counterweights, counterweight connections descending over the roadway, and a transverse girder having its ends extended beyond the roadway and supporting said counterweights outside of the roadway of said bridge.

3. The combination with a movabe bridge of counterweights adapted to balance said bridge, counterweight connections in the planes of the trusses and over the roadway and a transverse girder extended beyond the



planes of the trusses and supporting said counterweights outside of the roadway of said bridge.

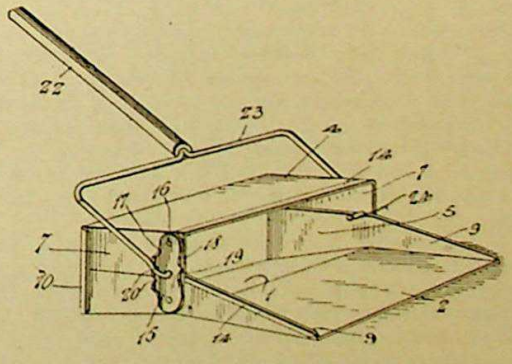
1,203,696. HAIR-DRYING FRAME. MARCUS W. BRUBAKER, Los Angeles, Cal. Filed Dec. 16, 1915. Serial No. 67,168. (Cl. 34—26.)



1. A hair drying frame, comprising a hair supporting ring; braces revolubly mounted on said ring; an adjustable head band having means to secure the lower ends of the braces either collapsibly or detachably connected thereto.

2. A hair drying frame, comprising a hair supporting ring; an adjustable head band; and braces connected to said ring and band; in combination with a vizor detachably connected to said head band.

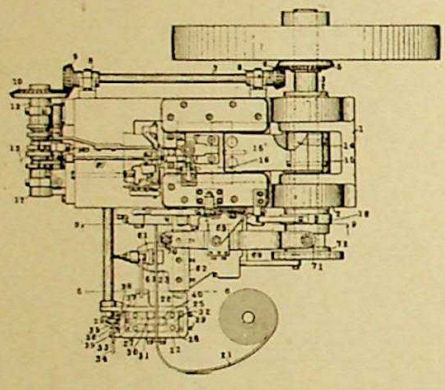
1,203,697. DUST-PAN. ALVAH J. BUMP, Cambridge, Ohio. Filed Feb. 23, 1916. Serial No. 79,994. (Cl. 65—20.)



1. A dust pan comprising a body, a back wall formed integral with said body, a front wall formed integral with the back wall and extending in a plane parallel to the body, side flanges formed on the body and front wall, connecting flanges at the outer edges of the side flanges, the said side flanges being bent at right angles to their respective walls and having their respective connecting flanges connected together, a centrally apertured pivot plate secured to the side flanges to hold their outer ends together and a bail pivoted to said pivot plate.

2. A dust pan comprising a body, a back wall formed integral with said body, front walls formed integral with the back wall and extending in a plane parallel to the body, side flanges formed on the body and front wall, connecting flanges formed at the outer edges of the side flanges, the side flanges being bent at right angles to their respective walls and having their connecting flanges connected together to form side walls, pivot plates secured to the side walls and straddling the seams therein to provide reinforcements therefor, a bail pivoted to said pivot plates, a handle on the bail and notched flanges on the pivot plates to hold the bail in various positions on the device.

1,203,698. NUT-MAKING MACHINE. ELLWOOD BURDSALL, Port Chester, N. Y., assignor to Russell Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y., a Corporation of New York. Filed Nov. 24, 1913. Serial No. 802,623. (Cl. 10—72.)



1. In an apparatus of the character described, in combination, a die comprising a reshaping head and a chamber coaxial with said head, and means adapted to move a blank into and out of said chamber to cause reshaping thereof, said means comprising a blank gripper movable toward and from said die and adapted to hold the blank as the same is being moved.

2. In an apparatus of the character described, in combination, a die comprising a reshaping head and a chamber coaxial with said head, means adapted to move a bar of stock into position opposite said chamber, and means adapted to sever a blank from said bar and carry the same under pressure into said chamber and against said reshaping head, said means comprising a blank gripper adapted to hold the blank as the same is being carried.

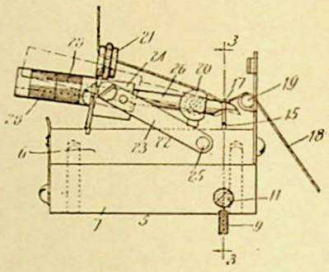
3. In an apparatus of the character described, in combination, a die comprising a reshaping head and a chamber coaxial with said head, said head having an opening communicating with said chamber, means adapted to move a bar of stock into position opposite said chamber, a reciprocatory gripper jaw adapted to operate through said opening, and a reciprocatory punch adapted on movement in one direction to sever a blank from said bar and press said blank against said head thereby reshaping the blank, said punch providing a gripping jaw adapted to coöperate with said first-mentioned jaw to move said blank into said chamber on said movement in one direction.

4. In an apparatus of the character described, in combination, a die comprising a reshaping head and a chamber coaxial with said head, said head having an opening communicating with said chamber, means adapted to move a bar of stock into position opposite said chamber, a reciprocatory combined ejector and gripper jaw adapted to operate through said opening, and a reciprocatory combined punch and gripper jaw adapted on movement in one direction to sever a blank from said bar, coöperate with the combined ejector and gripper jaw to move said blank into said chamber, and press said blank while in said chamber, said combined ejector and gripper being adapted to thereafter move said blank from said chamber.

5. In an apparatus of the character described, in combination, a die comprising a reshaping head and a chamber coaxial with said head, means adapted to move a bar of stock into position opposite said chamber, a reciprocatory member, a punch carried by said member, a sleeve through which said punch passes, means adapted to fix said punch to said sleeve, an abutment on said member against which said perforating punch and said sleeve bear during punching, and manual means adapted to move said abutment into and out of position to be engaged by said sleeve and said punch.

[Claims 6 to 30 not printed in the Gazette.]

1,203,699. ELECTRIC-CIRCUIT-CLOSING DEVICE. WILLIAM W. BURKE, Bennington, Vt., assignor to Cooper Manufacturing Company, Bennington, Vt., a Corporation of Vermont. Filed Mar. 25, 1916. Serial No. 86,779. (Cl. 66—7.)



1. A circuit closing device having, in combination, an electric circuit including a drop device adapted to open and close said circuit and constituting a guide for a strand of yarn, a plurality of guides for said yarn, a lever, and a plurality of guides for said yarn mounted on said lever whereby under abnormal tension said lever may be rocked by said yarn, one of said last-named guides being adjustable toward and away from said drop device.

2. A circuit closing device having, in combination, an electric circuit including a drop device adapted to open and close said circuit and constituting a guide for a strand of yarn, a plurality of guides for said yarn, a lever adapted to engage said drop device, and a plurality of guides for said yarn mounted on said lever whereby when under abnormal tension said lever may be rocked by said yarn to move said drop device to close said circuit, one of said last-named yarn guides being adjustable on said lever toward and away from said drop device.

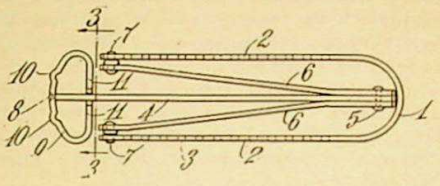
3. A circuit closing device having, in combination, an electric circuit including a drop device adapted to open and close said circuit and constituting a guide for a strand of yarn, a stationary guide for said yarn at one side of said drop device, a pair of movable guides for said yarn on the opposite side of said drop device and means connected with said movable guides and engaging said drop device adapted to be actuated by an abnormal tension on said yarn to move said drop device to close said circuit.

4. A circuit closing device having, in combination, an electric circuit including a drop device adapted to open and close said circuit and constituting a guide for a strand of yarn, a stationary guide for said yarn at one side of said drop device, a pair of movable guides for said yarn on the opposite side of said drop device and means connected with said movable guides and engaging said drop device adapted to be actuated by an abnormal tension on said yarn to move said drop device to close said circuit, one of said movable guides being adjustable toward and away from said drop device.

5. A circuit closing device having, in combination, an electric circuit including a drop device adapted to open and close said circuit and constituting a guide for a strand of yarn, a plurality of guides for said yarn, a lever, a pivot for said lever and a pair of guides for said yarn mounted on said lever, one of said last-named pair of guides being movable toward and away from said drop device whereby the weight at one side of said pivot may be varied.

[Claims 6 to 9 not printed in the Gazette.]

1,203,700. FOLDABLE SHOE-TREE. WARNER R. BUXTON, Springfield, Mass. Filed Feb. 5, 1916. Serial No. 76,317. (Cl. 12—128.)



1. A shoe tree, adapted to be folded into small compass, comprising, a U-shaped toe piece, a rounded heel member, and toggle links connecting said piece and member, said links arranged to be foldable one within another and within and into the same plane as the heel member and toe piece, said heel member having a pivotal connection with one of said links and adapted to be moved from a position at right angles to the plane of the toe piece to a position in the latter plane, all constructed and arranged so that the shoe tree may be folded into flat, thin, and compact form.

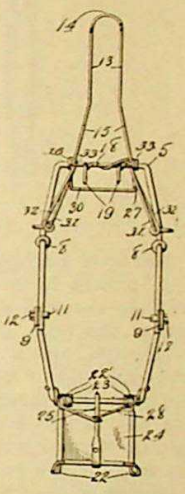
2. A foldable shoe tree, comprising, in combination, a U-shaped toe piece, a pair of links having adjustable pivotal connection at one end with the inner sides of said toe piece and offset so that the other ends are brought inwardly toward one another, another link pivoted at one end to and between said offset ends, and a heel piece pivoted to the opposite end of the last-named link, said pair of links and last-named link adapted to force and hold the toe and heel pieces apart with a toggle action, all constructed and arranged so that the last-named link folds within said pair of links and the folded links fold within and into the plane of the U-shaped toe piece, said heel piece being movable into the common plane of the links and U-shaped member, whereby the shoe tree may be folded in flat, compact, and substantially rectangular form.

3. A shoe tree adapted to be folded into small compass, comprising, a U-shaped part adapted to engage the toe of a shoe, a rounded member adapted to engage the heel of a shoe, a link connected to said member and disposed centrally with respect to said part and links on opposite sides of said first-named link and pivotally connected thereto, each of said last-named links having a detachable pivotal connection with a leg of said U-shaped part, said links adapted to force said part and member into engagement with the extremities of a shoe and to hold them in their moved position with a toggle action, all constructed and arranged so that the first-named link folds within said last-named links and the folded links fold within the U-shaped part whereby the shoe tree may be folded into flat, thin, compact form.

4. A foldable shoe tree, comprising, a U-shaped toe piece having a rounded end adapted to engage the toe of a shoe and two spaced parallel legs, a plurality of eyes formed in each of the latter, a link arranged centrally with respect to said toe piece, a pair of links pivoted at one end to the first-named link on opposite sides thereof, each link of said pair having means at the other end engageable in any of the eyes in said U-shaped member and arranged to bear laterally thereagainst with a spring action, and a rounded heel piece mounted on the end of said first-named link, all constructed and arranged so that the toe and heel pieces may be adjusted for length to fit any desired shoe and so that the said toe and heel pieces may be forced and held apart within the shoe by a toggle action of said links.

5. A shoe tree, adapted to be folded into small compass, comprising, a U-shaped toe piece, a pair of links pivotally connected at one end to the inner sides of said toe piece and offset so that the other ends are brought inwardly toward one another in spaced parallel relation, another link pivoted at one end to and between said offset ends, and a heel piece having a rounded end pivoted to the opposite end of said last-named link and arms inturned from said rounded end to lie closely adjacent said last-named link, said links arranged to be foldable one within another and within and into the same plane as said toe piece, said heel piece adapted to be moved into the common plane of the folded links and toe piece and to be moved to a position at right angles to said plane, said arms adapted to engage the edges of said last-named link to yieldably hold the heel piece in normal relation thereto.

1,203,701. ANIMAL-POKE. OCTAVE CARON, Scranton, N. D., assignor of one-fourth to Ernest W. Christopher, Scranton, N. D. Filed Jan. 22, 1915. Serial No. 3,795. Cl. 119—139.)



1. An animal poke including a frame, a lever movably associated with the lower end of the frame including a wire strand, an intermediate portion of which is formed to provide a parallelogram having feet depending therefrom, the opposite ends of said strand being convoluted about the frame and having the terminals thereof pointed to provide animal-engaging members to inflict injury on the animal when the lever is operated, and means to normally hold said animal-engaging members from penetration in the animal.

2. An animal poke comprising a plurality of adjustable sections, a U-shaped lever secured to and offset from one of the sections and having its arm divergent toward the section, loops attached to the lever for embracing the sides of the section for limiting the movement of the lever, and a second lever secured to the other section.

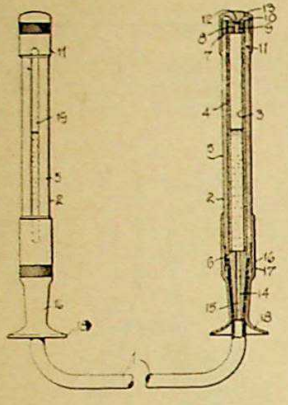
3. An animal poke including a frame of adjustable sections, a U-shaped lever having divergent arms which are coiled about the frame, the free ends thereof extend downwardly and form horizontal loops which receive the side arms of the section, after extending upwardly from said loops, one of the arms is coiled about the arms of the lever, while the other arm is entwined about the first, and both terminate in parallel pricking elements, and a lever secured to the other of said sections.

4. An animal poke including a frame of adjustable sections, levers movably connected to the sections, means for maintaining the levers in vertical position, one of said means comprising a wire strand having its ends coiled about the frame and engaging with a lever and its intermediate part bent to provide a guard for an adjacent pricking element, the other of said means having its ends coiled about the frame and intermediate part coiled about a pricking element secured to the adjacent lever.

1,203,702. LEVEL. ANDREW J. CASHEL, Casper, Wyo., assignor of one-third to William Cashel and one-third to William Snare, Casper, Wyo. Filed Oct. 1, 1915. Serial No. 53,612. (Cl. 33—209.)

1. In a level of the character described, an indicating device including a sleeve, a tube housed therein, a plug mounted in one end of said sleeve and abutting against one end of the tube, said plug having a passage extending

therethrough, and a perforated cap applicable to the end of the sleeve and provided with a protuberance adapted to close said passage, when the cap is in its applied position and forced downward against the plug; as and for the purpose set forth.

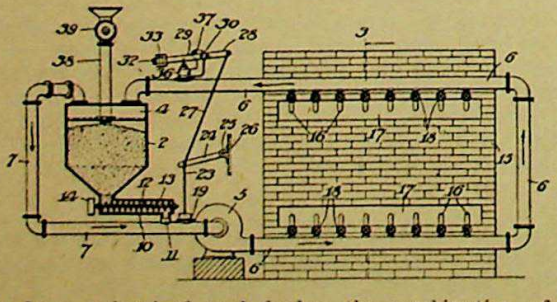


2. In a level of the character described, an indicating device including a sleeve, a tube housed therein, a plug screw threadedly mounted in one end of said sleeve and abutting against one end of the tube, said plug having a passage extending therethrough, and a cap having screw threaded engagement with the end of the sleeve and provided with a protuberance on its inner face adapted to close said passage when the cap is screwed down upon the sleeve, the cap being also formed with an aperture extending therethrough, as and for the purpose set forth.

3. In a level of the character described, an indicating device comprising a sleeve having a chamber formed therein and terminating at one end in a shoulder, a tube mounted in the chamber and abutting against the shoulder, means at one end of the sleeve engaging the sleeve and holding the tube therein, the sleeve being formed at its other end with an exteriorly tapered neck having a passage therethrough, a compressible conduit into which the neck is inserted and by which the conduit is expanded, and a collar having a cylindrical portion having screw threaded engagement with the sleeve and having a tapering portion extending concentrically to the tapering neck and the conduit and when in place clamping the conduit in place.

4. In a level of the character described, an indicating device including a tubular member, a clamping collar mounted upon the tubular member and formed at its end away from the tubular member with an outwardly flared extremity or bell, and a flexible pipe engaging the tubular member and surrounded by the collar, the flared extremity of the collar permitting the pipe to be flexed but limiting the flexing of the pipe.

1,203,703. PULVERIZED-COAL-FEEDING APPARATUS. LA RUE B. CHEVALIER, Iola, Kans. Filed Mar. 6, 1916. Serial No. 82,398. (Cl. 193—10.)



1. In a pulverized coal feeder, the combination of a closed coal bin, pipes connected to said bin and forming therewith a closed, endless circulating passageway, means to circulate air through said passageway, means to supply one of said pipes with coal from said bin without permitting air to pass from the bin with the coal, and a discharge pipe leading from one of said pipes.

2. In a pulverized coal feeder, the combination of a coal bin, a closed circulating pipe communicating with said bin and adapted to receive coal therefrom, means to circulate air through said pipe, and a discharge pipe leading from the circulating pipe.

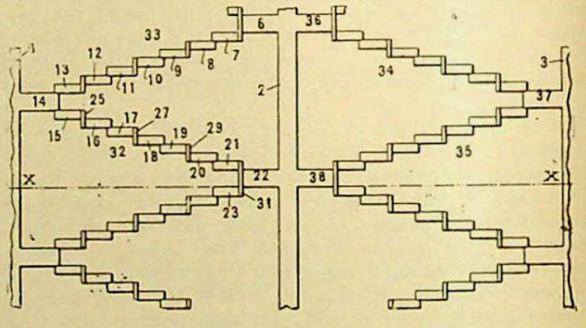
3. In a pulverized coal feeder, the combination of a coal bin, a closed circulating pipe, means operative to supply said pipe with coal from said bin, means to circulate air through said pipe, and a discharge pipe leading from the circulating pipe.

4. In a pulverized coal feeder, the combination of a closed coal bin, a circulating pipe discharging into and leading from the upper portion of said bin, means to discharge pulverized coal from the lower portion of said bin and into said pipe, means to circulate air through said pipe, and a discharge pipe leading from the circulating pipe.

5. In a pulverized coal feeder, the combination of a closed coal bin, a circulating pipe discharging into and leading from the upper portion of said bin, means to supply pulverized coal to the bin, means to discharge pulverized coal from the lower portion of said bin and into said pipe, means to circulate air through said pipe, and a discharge pipe leading from the circulating pipe.

[Claims 6 to 24 not printed in the Gazette.]

1,203,704. EXPANDED-METAL FABRIC. NORRIS ELMORE CLARK, Plainville, Conn. Filed Mar. 11, 1908. Serial No. 420,520. (Cl. 72—117.)



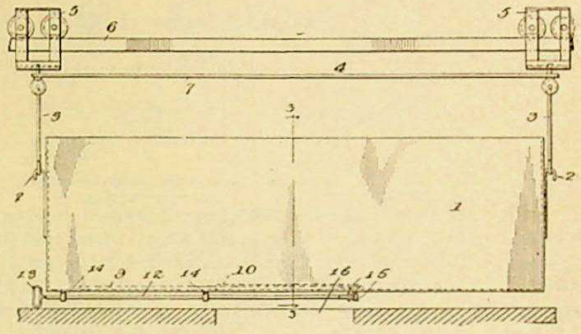
1. An expanded metal fabric consisting of parallel side bars and a center bar, opposite projections integral with the sides of the center bar, the projections on one side being directly opposite and in line of cross tension with the projections on the opposite side, projections integral with the side bars and between the longitudinal positions of the projections carried by the center bar, and extensible strips composed of integrally united strands projecting at right angles to the bars with their edges parallel and connecting the projections and forming diamon shaped openings divided by the bars adjacent connecting strands being independent of each other.

2. An integral expanded metal structure comprising a longitudinal center bar, longitudinal side bars disposed in a plane below the plane of the center bar, strands connected to the center bar and extending horizontally in opposite directions from the sides of said center bar and strips each consisting of integrally united vertical strands connected with the outer ends of the horizontal strands and adjacent strips extending downwardly on opposite inclines and connected with the side bars at their lower ends to form zigzag truss-like sides connecting the horizontal strands and side bars.

3. An expanded metal fabric blank having two rows of longitudinal slits therein spaced apart and with the slits in the respective rows arranged in staggered relation with respect to each other and two series of spaced transverse slits united with each of the longitudinal slits and arranged with one series of transverse slits extending from a longitudinal slit in one row overlapping and alternating

with one series of transverse slits extending from a longitudinal slit in the second row and the second series of transverse slits extending from the first-mentioned longitudinal slit in the first row overlapping and alternating with the transverse slits extending from the longitudinal slit in the second row which adjoins the first mentioned longitudinal slit in the second row.

1,203,705. DOUGH-TROUGH. CORRY B. COMSTOCK, New York, N. Y., assignor to Ward Bread Company, a Corporation of New York. Filed May 31, 1911. Serial No. 630,380. (Cl. 107—7.)



1. In an apparatus for holding dough while fermenting and delivering it thereafter, the combination of a bodily horizontally movable trough having an elongated relatively narrow body with a bottom which is substantially horizontal from end to end and adapted to be sustained closely adjacent to a horizontal floor, said bottom having an opening therein of considerably less area than that of the entire bottom, and a manually movable closure for the opening.

2. In an apparatus for holding dough while fermenting and delivering it thereafter, the combination of a bodily horizontally movable trough having an elongated relatively narrow body with a bottom which is substantially horizontal from end to end and adapted to be sustained closely adjacent to a horizontal floor, said bottom having an opening therein of considerably less area than that of the entire bottom through which dough in the trough can be discharged into a similarly sized opening in the said floor, and a manually movable closure for the opening.

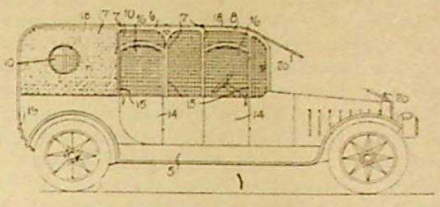
3. In an apparatus for holding dough while fermenting and delivering it thereafter, the combination of a bodily horizontally movable trough having an elongated relatively narrow body with a bottom which is substantially horizontal from end to end and adapted to be sustained closely adjacent to a horizontal floor, said bottom having an opening therein of considerably less area than that of the entire bottom through which dough in the trough can be discharged into a similarly sized opening in the said floor, and a horizontally slidable manually movable closure for the opening.

4. In a dough carrying apparatus, the combination with a support permitting horizontal movement, of an elongated trough body carried by the said support and having a flat bottom provided with a relatively small opening, a parallel edged plate secured to the upper surface of the bottom and provided with an opening in register with that in the bottom, a slidable door having guiding means for engaging the parallel edges of the plate, and means for moving the door into or out of position to cover the openings in the plate and in the bottom.

5. In a dough carrying apparatus, the combination with a support permitting horizontal movement, of a trough body carried by the said support and having a bottom provided with a relatively small opening, and a slidable door above the bottom and held by gravity alone, the said door being movable into and out of position to cover the opening.

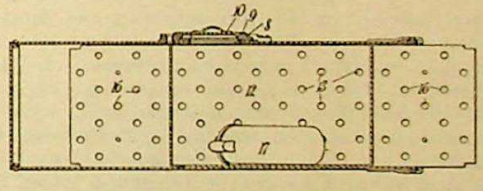
[Claims 6 and 7 not printed in the Gazette.]

1,203,706. GUARD FOR VEHICLES. BENJAMIN F. CONE, Ashland, Nebr. Filed Feb. 2, 1916. Serial No. 75,876. (Cl. 21—7.)



The combination with a vehicle body, of a frame structure secured thereto and extending above the side and rear walls of the body, reticulated side, top and rear end walls secured to the frame structure, said frame structure terminating a predetermined point inwardly of the front end of the vehicle body, the forward end of the frame being open, and a longitudinally disposed reinforcing bar extending centrally over the top of the frame structure and secured thereto, and downwardly to the rear end thereof and having its lower end fixed to the vehicle body, said reinforcing bar at its forward end being downwardly inclined from the frame structure to the front end of the vehicle body and fixed thereto.

1,203,707. REFUSE-TANK. HARRISON TAYLOR CRONK, New York, N. Y., assignor to Cronk-Salter Company, New York, N. Y., a Corporation of New York. Filed May 4, 1912. Serial No. 695,135. (Cl. 4—20.)



1. A closet refuse receptacle, comprising an outer tank and in fluid communication therewith, an inner tank removably carried by said outer tank, baffle plates carried by said inner tank and extending from a wall of said inner tank to the adjacent wall of said outer tank, said baffle plates having apertures extending therethrough, to permit the passage of water from one portion of said outer tank to another portion thereof, and bracing rods connecting certain of said baffle plates.

2. A closet refuse receptacle, comprising an outer tank, an inner tank removably carried by said outer tank and fitting between the top and bottom walls thereof, baffle plates carried by said inner tank and extending from a wall of said inner tank to the opposite wall of said outer tank, said baffle plates having apertures extending therethrough, to permit the passage of fluids from one portion of said outer tank to another portion thereof, and means bracing said baffle plates in position relative to each other.

3. In a device of the class described adapted to be carried on a railroad-car, the combination with an outer tank having an opening thereto for the admission of refuse, and means for closing said tank, of an inner tank removably positioned within said outer tank and in fluid communication therewith supported from the bottom thereof engaging the top thereof and in communication with said opening to receive the refuse inserted through said opening, said inner tank having portions thereof engaging the inner side walls of the outer receptacle to prevent movement of said inner receptacle due to the rocking of the car.

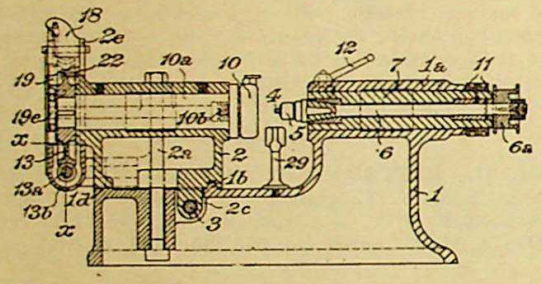
4. In a device of the class described, the combination with an outer tank adapted to contain liquid refuse material, said tank having an inlet thereto, of an inner tank adapted to be inserted within said outer tank resting on the bottom of the outer tank and means bracing said inner tank from movement in all directions, said inner tank adapted to be placed in communication with said

inlet, said inner tank having a fluid communication with said outer tank whereby liquids will drain from said inner into said outer tank while retaining the solid matter within said inner tank.

5. In a device of the class described, the combination with a rectangular tank having an open end and having an inlet in the top thereof, of an inner tank adapted to be inserted into said outer tank through said open end into communication with said inlet, means for closing said open end, said inner tank having a height to fit between the top and bottom walls of said outer tank and having means coextensive with the height of the inner tank extending therefrom for bracing the same from the side walls of the outer tank.

[Claim 6 not printed in the Gazette.]

1,203,708. MILLING AND ROUTING MACHINE. FRANCIS DAVIES, Philadelphia, Pa. Filed May 15, 1916. Serial No. 97,542. (Cl. 90—14.)

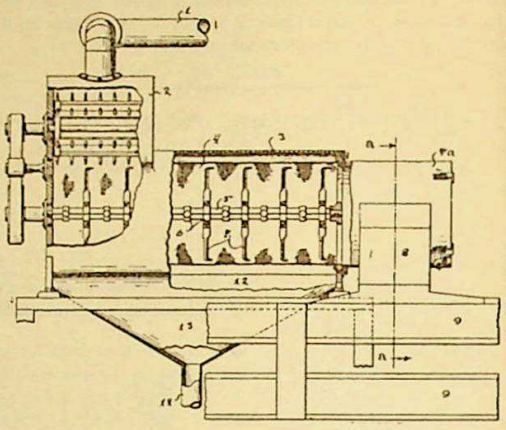


1. In a milling and routing machine, the combination of a frame or bed; a milling cutter rotatable in a bearing thereon; a headstock fitted to traverse on the bed, transversely to the axis of the cutter; a chuck spindle journaled in said headstock; a worm wheel fixed on the chuck spindle; a bearing bracket pivotally supported on the headstock; a feed worm journaled in said bearing bracket and adapted to engage the worm wheel; means for rotating said feed worm; manually operable means for moving the bearing bracket about its pivotal axis to engage the feed worm with the worm wheel; means for retaining said bearing bracket in position to maintain operative engagement of the feed worm and worm wheel; and means automatically operable by the rotation of the chuck spindle, for releasing said retaining means at a predetermined point in the rotation of the chuck spindle.

2. In a milling and routing machine, the combination of a frame or bed; a milling cutter rotatable in a bearing thereon; a headstock fitted to traverse on the bed, transversely to the axis of the cutter; a chuck spindle journaled in said headstock; a worm wheel fixed on the chuck spindle; a bearing bracket pivotally supported on the headstock; a feed worm journaled in said bearing bracket and adapted to engage the worm wheel; means for rotating said feed worm; manually operable means for moving the bearing bracket about its pivotal axis to engage the feed worm with the worm wheel; a bracket arm fixed to the bearing bracket; a trip lever pivoted to the casing of the worm wheel and maintaining operative engagement of the feed worm and wheel by bearing on the bracket arm; and a tripping dog fixed to the worm wheel and adapted to disengage the trip lever and bracket arm at a predetermined point in the rotation of the chuck spindle.

1,203,709. APPARATUS FOR CLEANING COTTON. EUSTICE E. DICKERSON, Fort Worth, Tex. Filed Mar. 1, 1915. Serial No. 11,169. (Cl. 13—19.)

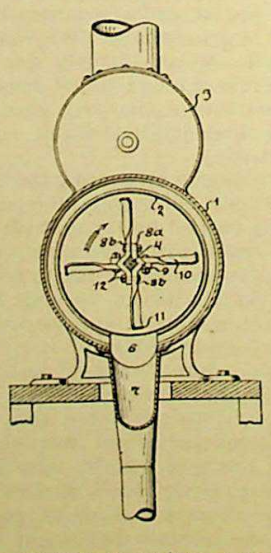
1. In an apparatus of the character described, a cleaning chamber comprising a screen wall, an imperforate casing surrounding the wall, a shaft and stirring paddles revolving within the screen wall combined with means for introducing air and cotton under pressure to one end of the cleaning chamber, a discharge chamber in open communication with the other end of said cleaning chamber, said discharge chamber having an imperforate wall forming a continuation of the imperforate casing and a chute leading from the periphery of the discharge chamber and forming an outlet from said discharge chamber for said cotton.



2. In an apparatus of the character described, a cleaning chamber having a screen wall and a shaft and paddles revolving within the screen wall, combined with an imperforate casing surrounding the screen wall, a trough constituting a discharge for the dirt and leading from the casing to the external air, a means for introducing air and cotton under pressure to one end of the cleaning chamber, a barrel-shaped discharge chamber in open communication with the other end of the cleaning chamber, said discharge chamber having an imperforate wall forming a continuation of the imperforate walls of the casing and a chute leading from the periphery of the discharge chamber and constituting an outlet for the cotton from the cleaning chamber.

3. In an apparatus of the character described, a cleaning chamber having a screen wall, a stirring and fluffing means rotating within said screen wall and a means for introducing air and cotton under pressure to said chamber, combined with an imperforate casing inclosing the screen wall and projecting beyond the cleaning chamber to form an outlet for the cotton and air from said chamber and a means for discharging dirt, blown through said screen wall from the cotton in its passage through the cleaning chamber, from the imperforate casing to the external atmosphere.

1,203,710. COTTON-CLEANER. EUSTICE E. DICKERSON, Fort Worth, Tex. Filed May 7, 1915. Serial No. 26,478. (Cl. 13—19.)

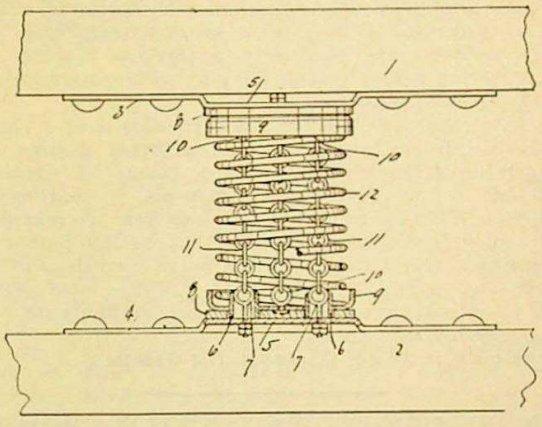


1. In a cotton cleaner, a casing, a screen chamber inclosed by said casing and concentric therewith, a means

for introducing air and cotton under pressure to the interior of the screen chamber, a shaft traversing the screen chamber axially, a series of blades projecting from the shaft and revolving therewith, each of said blades having a flattened body projecting at an angle to the plane of the shank of the blade, and each body provided at its free end with a forwardly and downwardly projecting lip.

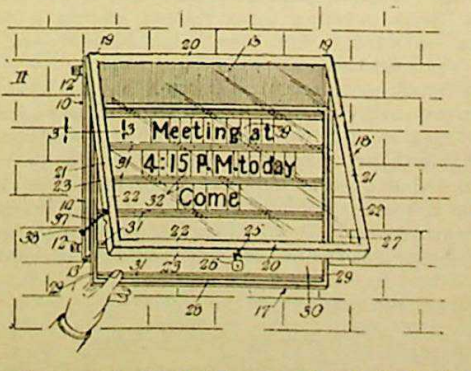
2. In a device of the character described, a paddle blade comprising a shank, a flat surfaced body for the blade formed integral with the shank and projecting with its flat surfaces therefrom at an angle of 45 degrees to the plane of the flat faces of the shank, said body curved forward and downward to form at its free end an overhanging lip.

1,203,711. SHOCK-ABSORBER. JOHN DIERINGER, Tacoma, Wash. Filed Aug. 10, 1915. Serial No. 44,686. (Cl. 267—42.)



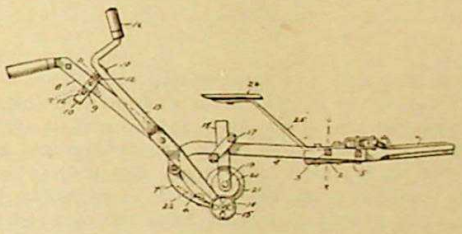
In a shock absorber adapted for automobile use, the combination of a pair of oppositely disposed cupped end plates attachable to the chassis of an automobile, thimbles secured to the inner sides of said end plates, cupped heads arranged between and concentric with the said end plates and having perforations through which the said thimbles normally project, resilient washers interposed between the said heads and end plates, whereby the striking together directly of the end plates and heads is prevented, a coiled spring interposed between the said heads, flexible members within the said coiled spring and adjustably connecting one end plate to the oppositely disposed head, other similar members similarly connecting the other end plate and head, the ends of said flexible members which are secured to the end plates passing through said thimbles.

1,203,712. BULLETIN-BOARD. WILLIAM H. DIETZ, Chicago, Ill. Filed Feb. 12, 1914. Serial No. 818,201. (Cl. 40—140.)



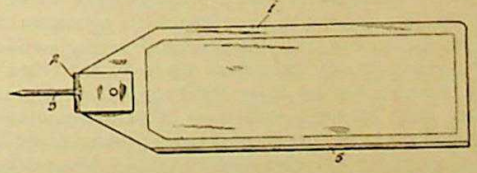
A bulletin board, comprising a closed back frame, a secondary frame adapted to close upon the first named frame and having a transparent face, said back frame comprising rabbeted upper and lower and end frame members, a supplemental frame removably engaged in the rabbeted part of said back frame, said supplemental frame including a backing member, vertically spaced horizontal retaining strips fixed on said backing member, card members adapted to be retained by said strips, each strip comprising a base attached to the backing member and top and bottom flanges spaced from said base, the top flange being of less depth than the lower flange and the vertically adjacent strips being spaced apart at a distance to permit the insertion of the card members between them, the front faces of the supplemental frame and of its card retaining strips being in the same plane as that of the front face of the back frame and said secondary frame being adapted to engage and overlap the lateral edges of said supplemental frame when the secondary frame is in closed position and means for locking said secondary frame in said closed position.

1,203,713. SWEET-POTATO DIGGER. SIMEON DILDAY, Marissa, Ill. Filed Jan. 10, 1916. Serial No. 71,300. (Cl. 55—139.)



A device of the class described, comprising a pair of beams, a tongue having its rear end attached between the beams, said beams having their rear ends terminating in downwardly curved portions, a cutting blade having its ends connected to the lower ends of said portions, handles fixed to the beams, levers pivotally connected to the handles and having wheels rotatably connected at their lower ends, plates carried by the handles and having nuts mounted thereon, said levers being adapted to engage selected nuts to hold the wheels in raised or lowered positions.

1,203,714. ADVERTISING-DART. LOUIS J. DISSER, Ferguson, Mo. Filed Oct. 3, 1914. Serial No. 864,805. (Cl. 40—25.)

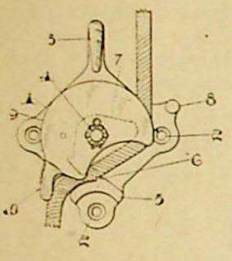


An advertising dart of the character described comprising a rigid and flat plaque-like tail of suitable shape to receive lettering for advertising purposes, a weighted dart point rigidly carried thereby, whereby when the device is thrown it will stick in a desired place, and means for weighting one edge of said tail for the purpose of maintaining the flat side of the tail in a substantially vertical plane when the dart is thrown horizontally.

1,203,715. ROPE-GRIP. JAMES CALIB DOUST, Toronto, Ontario, Canada, assignor of three-fourths to James H. Lumbers, Toronto, Ontario, Canada. Filed Jan. 21, 1915. Serial No. 3,542. (Cl. 24—133.)

1. In a rope grip, the combination of a plate; a gripping member shaped as a bent lever and pivoted intermediate its ends on the plate; an abutment formed on the plate in position to enable a rope to be gripped against it by one end of the lever; and a weighted tail on said lever adjacent the aforesaid end and out of the path of the rope through the grip, said tail tending, when the grip is in normal position, to move the lever toward the abutment, said tail also being directed outwardly and downwardly to act as a guide when a rope is being introduced between the lever and the abutment.

2. In a rope grip, the combination of a plate; a gripping member shaped as a bent lever and pivoted intermediate its ends on the plate; an abutment formed on the plate in position to enable a rope to be gripped against it by one end of the lever, said abutment having a convex surface toward the lever; said lever when the grip is in normal position tending to move to the rope engaging position; a cheek piece projecting beyond the ends of the lever, the latter and the cheek piece being cut away to form a side opening between the lever and abutment when the lever is rocked to a rope disengaging position.

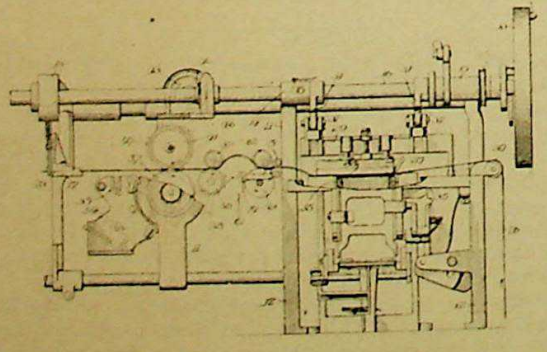


3. In a rope grip, the combination of a plate; a gripping member shaped as a bent lever and pivoted intermediate its ends on the plate; an abutment formed on the plate in position to enable a rope to be gripped against it by one end of the lever; said lever when the grip is in normal position tending to move to the rope engaging position; and a pin projecting forwardly from the plate at the same side of the abutment as the pivot of the lever in substantial alinement with the ends of the lever when the latter is engaged by a rope and spaced sufficiently from the lever for the lateral introduction of a rope between the two.

1,203,716. CURVED PRINTING-PLATE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed July 5, 1913. Serial No. 777,414. (Cl. 101—178.)

A sectional printing element, comprising a metal sheet of relatively narrow width provided with a rearwardly extending flange along one longitudinal edge, and a plurality of longitudinally extending lines of flat-faced printing characters struck up from the body of the metal, said plate being bent between said lines of printing characters, whereby said plate is curved and the printing faces of said printing characters are disposed in planes tangential to a curve concentric to the curvature of said plate.

1,203,717. PRINTING-MACHINE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 28, 1913. Serial No. 787,047. (Cl. 101—1.)



1. In a printing machine, the combination of means for feeding a web through the machine, means for printing periodically changing data at predetermined and successively veriable intervals on the web and means for subsequently printing on said web an unchanging impression in predetermined relation to said first printed data.

2. In a printing machine, the combination of means for feeding a strip of paper through the machine, means for printing data at predetermined and successively variable intervals on said strip, and means for subsequently printing additional data on said strip in predetermined relation to said first printed data.

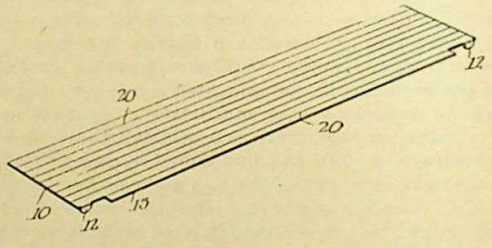
3. In a printing machine, the combination of a manually operated printing platen, means for feeding printing devices into operative relation to said platen, a rotary impression cylinder, means for feeding a web intermittently and successively variable distances past said platen, and means for feeding the web continuously to said cylinder.

4. In a printing machine, the combination of a reciprocatory platen mechanism for feeding printing devices successively from a stack to printing position beneath said platen, a rotary impression cylinder, means for feeding a web of material to be printed intermittently past said platen between the successive operations thereof, and means for subsequently feeding said web continuously to the impression cylinder.

5. In a printing machine, the combination of a platen, means for intermittently feeding printing devices into operative relation with said platen, means for operating said platen at predetermined intervals, a continuously operating printing mechanism, means for intermittently feeding a web of paper or the like between said platen and a printing device between the successive operations of said platen, and means for subsequently feeding said printed strip by a continuous motion to said continuously operating printing mechanism.

[Claims 6 to 13 not printed in the Gazette.]

1,203,718. PRINTING-FORM SECTION. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 31, 1915. Serial No. 69,571. (Cl. 101—169.)



1. A printing form section having a down-turned lug on one edge adjacent each end thereof and type characters struck up from the body of the section closely adjacent the edge thereof between said lugs.

2. A blank printing form section having down-turned lugs on one edge adjacent the ends thereof and a flange extending outwardly from said edge between said lugs.

3. A blank printing form section having a flange extending outwardly from one edge thereof and of less length than said edge.

4. A blank printing form section having a flange projecting outwardly from one edge thereof, the ends of said flange being spaced from the ends of the section.

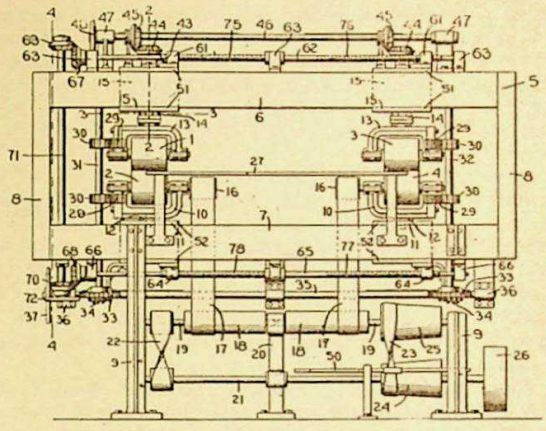
5. A blank printing form section having a character portion and flanges at opposite edges of the section abutting the character portion, the section being weakened between each flange and the character portion to permit the flanges being readily broken off and one of said flanges being of less length than the section.

[Claim 6 not printed in the Gazette.]

1,203,719. CLOTH STRETCHER AND STRAIGHTENER. JOHN EDMUNDS, Waltham, Mass. Filed Oct. 8, 1915. Serial No. 54,781. (Cl. 26—18.)

1. In a machine for stretching and straightening cloth, the combination with two pairs of cloth-feeding and

stretching rollers adapted to act on the edges of a web of cloth, of means for adjusting said pairs of rollers toward and from each other to correspond to different widths of cloth, means for positively driving one roller of each pair, and means operative in any adjusted position of said pairs of rollers to vary the relative speed of the driven rollers.



2. In a device of the class described, the combination with two pairs of cloth-feeding and stretching rollers adapted to act on the edges of a web of cloth, of means to adjust the rollers of both pairs simultaneously about an axis at right angles to the axis of the roliers, and means operative in any adjusted position of the rollers for rotating the same.

3. In a device of the class described, the combination with two pairs of cloth-feeding and stretching rollers adapted to act on the edges of a web of cloth, of means to adjust said pairs of rollers toward and from each other to correspond to different widths of cloth, means for rotating said rollers, and means operative in any adjusted position of the rollers to adjust the rollers of both pairs simultaneously about an axis at right angles to the axis of the rollers.

4. In a device of the class described, the combination with two pairs of cloth-feeding and stretching rollers adapted to act on the edges of a web of cloth, of means for positively driving one roller of each pair, means for varying the relative speed of the driven rollers, and means to adjust the rollers of both pairs simultaneously about an axis at right angles to the axis of the rollers.

5. In a device of the class described, the combination with two pairs of cloth-feeding and stretching rollers adapted to act on the edges of a web of cloth, of means for positively driving one roller of each pair, means for varying the relative speed of the driven rollers, and means to adjust the rollers of both pairs simultaneously about axes at right angles to the axes of the rollers.

[Claims 6 to 11 not printed in the Gazette.]

1,203,720. COMPOSITION FOR TREATING RUBBER TIRES, &c. DAVID G. ELDER, Chickamauga, Ga. Filed Apr. 7, 1913. Serial No. 759,441. (Cl. 134—17.5.)

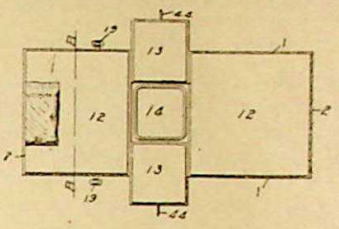
1. A rubber tire treating composition containing a paste, plaster of Paris, chalk, a perfuming medium, alcohol and bismuth subnitrate in proportions substantially set forth in the specification.

2. A rubber tire treating composition in liquid form, containing a paste, plaster of Paris, chalk, alcohol, bismuth subnitrate, and a perfuming medium in proportions substantially set forth in the specification.

3. A rubber tire treating composition in liquid form containing a paste, plaster of Paris, chalk, bismuth subnitrate, rose water, and alcohol in proportions substantially set forth in the specification.

4. A rubber tire treating composition in liquid form containing a paste, plaster of Paris, chalk, bismuth subnitrate, rose water, caramel, and alcohol in proportions substantially set forth in the specification.

1,203,721. HOSPITAL-BED. JOSEPH E. FAZAKERLEY, Pittsfield, Mass. Filed June 1, 1915. Serial No. 31,395. (Cl. 5—12.)



1. In a bed of the character described, the combination with a bed frame of open structure, a mattress support carried on the frame and having a closable transverse opening therethrough, a mattress carried on the mattress support and having a closable transverse opening over said opening in the mattress support, and a receptacle detachably secured to the frame and disposed normally below the location of said openings in the mattress and mattress support, of means for opening the mattress and mattress support to receive said receptacle, said means operating to synchronously elevate the receptacle into position for use.

2. In a bed of the character described, the combination with a bed frame of open structure, a mattress support carried on the frame and having a closable transverse opening therethrough, a mattress carried on the mattress support and having a closable transverse opening over said opening in the mattress support, and a receptacle detachably secured to the frame and disposed normally below the location of said openings in the mattress and mattress support, of means for opening the mattress and mattress support to receive said receptacle, and for synchronously elevating the receptacle into position for use, said means being operable to close said openings in the mattress and mattress support and to synchronously restore said receptacle to its original position.

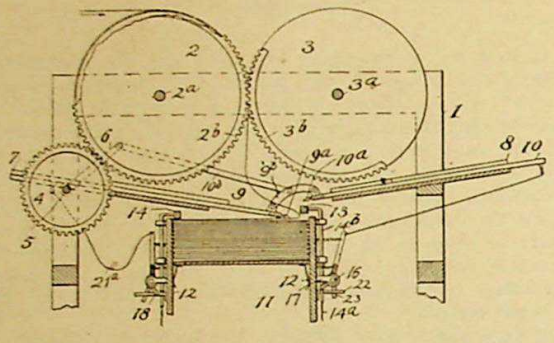
3. In a bed of the character described, the combination with a bed frame of open structure, a mattress support carried on the frame and including relatively adjustable members arranged centrally thereof for providing a closable opening through the mattress support, a mattress carried on the mattress support and comprising a plurality of independent sections, a portion of which sections are movable with said adjustable members of the mattress support, and an adjustable receptacle disposed under the frame adjacent the closable opening in the mattress support, of means operable by the occupant of the bed for simultaneously spacing the said adjustable members of the mattress support to provide a transverse opening through the bed, and elevating the receptacle into said opening for use.

4. In a device of the class described, a frame of open structure, a mattress support carried on the frame, a mattress carried on the mattress support, means for providing a closable opening through the mattress and mattress support, a receptacle secured to the frame and disposed under said closable opening, an adjustable cover for covering the receptacle, and means secured to the frame and operable by the occupant of the bed for synchronously providing an opening through the mattress and mattress support, elevating said receptacle into said opening for use, and withdrawing the cover from the receptacle, said means including means to restore said adjustable members to their original positions.

5. In a device of the class described, a frame of open structure, a mattress support carried on the frame, a mattress carried on the mattress support, means for providing a closable opening through the mattress and mattress support, a movable support secured to the frame and disposed under said closable opening, a receptacle carried on said movable support, a covering provided over the receptacle, means operable by the occupant of the bed for elevating and lowering said receptacle and receptacle support, including means operable by said receptacle adjusting means for synchronously withdrawing said covering

from its normal position over the receptacle when the receptacle is elevated toward said closable opening and restoring said covering to its normal position when the receptacle is withdrawn from said opening.

1,203,722. FOLDING-MACHINE. GEORGE L. FULK, Cleveland, Ohio, assignor to The Postal Supply and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 2, 1914. Serial No. 821,934. (Cl. 101—43.)



1. A folding machine comprising a feeding device adapted to feed a continuous web of material, a pair of oppositely disposed slides, yieldable heads carried by said slides, and a receiving means into which the web is folded.

2. A folding machine comprising a feeding device adapted to feed a continuous web of material, a pair of oppositely disposed slides, yielding heads carried by the slides, means for alternately reciprocating said slides, and receiving means into which the web of material is folded by the slides.

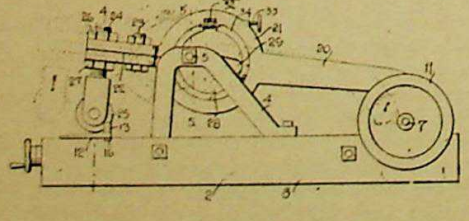
3. A folding machine comprising a feeding means adapted to feed a continuous web of material, a pair of oppositely disposed slides, yielding heads carried by said slides, means for alternately reciprocating said slides, a receiving means having a pair of oppositely disposed walls, said slides folding the web against said walls.

4. A folding machine, comprising a feeding means adapted to feed a continuous web of material, a pair of oppositely disposed slides, a link flexibly connecting adjacent portions of said slides, and means for moving said link to cause the slides to reciprocate.

5. A folding machine, comprising a feeding device adapted to feed a continuous web of material, a receiving chute 11 beneath the feeding means, a pair of reciprocating slides which move across the said chute, a link pivotally connected at its opposite ends to the adjacent or head ends of the slides, a rod pivotally connected to said link, and means for reciprocating said rod.

[Claims 6 to 8 not printed in the Gazette.]

1,203,723. MACHINE FOR DRAWING SHARP EDGES ON METALLIC BODIES. CHARLES FULLER, Gilbert, Ariz., assignor of one-fourth to L. B. McFrederick, Mesa, Ariz., and one-fourth to L. M. Nowell, Gilbert, Ariz. Filed Nov. 10, 1915. Serial No. 60,737. (Cl. 29—83.)



1. In a mechanism of the character described, the combination with an anvil, of a bar having a drawing head at one end, a fixed fulcrum, means for pivotally and slidably supporting the bar intermediate its ends upon said fulcrum, and means for rotating that end of the bar opposite to the head.

2. In a mechanism of the character described, the combination with an anvil, of a bar or shank having a drawing head at one end, a fixed fulcrum, means for pivotally and slidably supporting the bar or shank on said fulcrum, and means for longitudinally shifting and oscillating the bar.

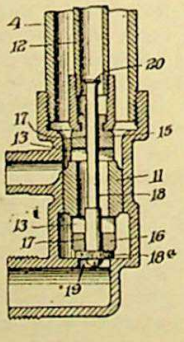
3. In a mechanism of the character described, an anvil, a bar or shank having a drawing head at one end and a yoke intermediate its ends, a fulcrum passing through the yoke and with which the yoke has sliding rotative engagement, and means for rotating that end of the bar or shank opposite the head in a plane at right angles to the fulcrum.

4. In a mechanism of the character described, a base, an anvil supported thereon, supports extending upward from the base, a fulcrum member on said supports, a bar or shank having a drawing head at one end, the bar or shank intermediate its ends being formed with a longitudinally slotted yoke through which the fulcrum pin passes, and a power operated crank mounted upon the base and operatively engaging the end of the shank opposite the head.

5. In a mechanism of the character described, a base, an anvil supported thereon, supports extending upward from the base, a fulcrum member on said supports, a bar or shank having a drawing head at one end, the bar or shank intermediate its ends being formed with a longitudinally slotted yoke through which the fulcrum pin passes, a power operated crank mounted upon the base and operatively engaging the end of the shank opposite the head, and means whereby the angle of the slot in said yoke may be changed.

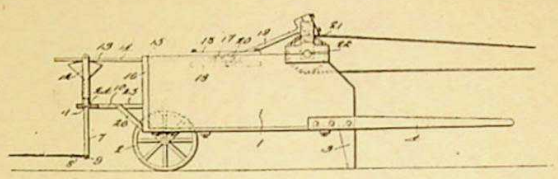
[Claims 6 to 11 not printed in the Gazette.]

1,203,724. VALVE CONSTRUCTION FOR WATER-CLOSET APPARATUS. ALBERT F. GABELL, Philadelphia, Pa., assignor to I. X. L. Pump and Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 7, 1914. Serial No. 865,438. (Cl. 137—69.)



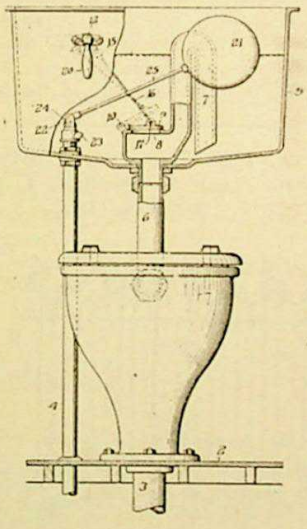
In mechanism of the character described, the combination of a water supply pipe, a waste pipe for discharging water from a portion of said pipe, a longitudinally movable rod situated in said water supply pipe provided with a valve at its lower end for closing the outlet of said waste pipe when the said rod is in raised position, a valve for controlling the passage of water through the said supply pipe said valve having a stem which extends upwardly through the said first-mentioned valve and which has slidable connection with the said rod, the lower end of the first-mentioned valve or an extension therefrom normally resting against the said second-named valve to hold it in closed position, and means whereby the said rod may be raised to move the first-named valve into closed position and to release the second-named valve whereby the latter may be opened by the pressure of the water against the under side thereof, said last-mentioned valve being adapted to be closed in case the back pressure of the water should be greater than the pressure of water against the underneath side thereof while the said rod is in raised position.

1,203,725. WHEELBARROW-SAW. ARMSTRONG R. GANO, Thayer, Kans. Filed Apr. 23, 1915. Serial No. 23,407. (Cl. 143—63.)



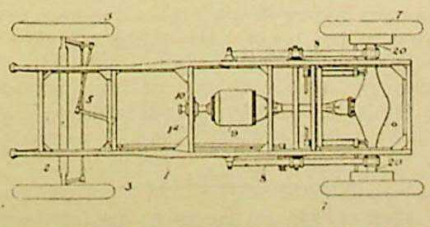
The combination with a portable frame, of a member carried by said frame and projecting forwardly therefrom, a vertically disposed lever pivoted upon said member to swing in a vertical plane, a horizontally disposed extension carried by the lower end of said lever, a saw having one of its ends pivoted upon said extension, said saw lying and operating in a horizontal plane, spring means engaged with said saw and with the extension and acting to impel the saw laterally and toward the work and means carried by the frame for actuating said lever.

1,203,726. FLUSH-TANK-VALVE-ACTUATING MECHANISM. WILLIAM U. GRIFFITHS, Philadelphia, Pa. Filed Apr. 14, 1914. Serial No. 831,717. (Cl. 4—5.)



The combination of a flush tank valve, a rotatable member having an arm, a link having connection with the said valve and with the said arm, the said link and arm being normally in substantial alinement, and means for rotating said member in either direction for opening the said valve.

1,203,727. MOTOR-VEHICLE. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 21, 1914. Serial No. 820,114. (Cl. 21—90.)



1. In an electric motor vehicle, the combination with a frame and wheeled supports at the front and rear ends thereof, including rear axle driving mechanism having a housing, of an electric motor having a casing, a rigid connection between the motor casing and said housing, and means arranged in front of said motor and motor casing and between the motor casing and said frame for movably supporting said motor, the said means comprising a ball and socket joint and a connection between the front end of the motor casing and said joint, slidably supported in the ball of said joint whereby said rear axle, motor and connections therebetween as a unit may swing in all directions relatively to the frame and move to and fro longitudinally of the frame.

2. In an electric motor vehicle, the combination with a frame and wheeled supports at the front and rear ends thereof, including rear axle driving mechanism having a housing, of an electric motor having a casing, a rigid connection between the motor casing and said housing, and means arranged in front of said motor and motor casing and between the motor casing and said frame for movably supporting said motor, the said means comprising a ball and socket joint and a connection between the front end of the motor casing and said joint, slidably supported in the ball of said joint, and the axis of said joint being in line with the axis of the shaft for said motor whereby said rear axle, motor and connections therebetween as a unit may swing in all directions relatively to the frame and move to and fro longitudinally of the frame.

3. In an electric motor vehicle, the combination with a frame and wheeled supports at the front and rear ends thereof, including rear axle driving mechanism having a housing, of an electric motor having a casing, a rigid connection between the motor casing and said casing, a member fixed to and extending from the front end of the motor casing, a universal joint arranged in front of said motor and comprising ball and socket members, the ball member being provided with a diametrically extending bearing to slidably and rotatably receive said member extending from the motor casing, and means for rigidly securing said socket member to said frame whereby said rear axle, motor and connections therebetween as a unit may swing in all directions relatively to the frame and move to and fro longitudinally of the frame.

4. In an electric motor vehicle, the combination with a frame and wheeled supports at the front and rear ends thereof, including rear axle driving mechanism having a housing, of an electric motor having a casing, a rigid connection between the motor casing and said housing, and means arranged in front of said motor and motor casing and between the motor casing and said frame for movably supporting said motor, the said means comprising ball and socket members and a connection extending forward from the front end of the motor casing and slidably mounted in the ball member of said supporting means whereby said rear axle, motor and connections therebetween as a unit may swing in all directions relatively to the frame and move to and fro longitudinally of the frame.

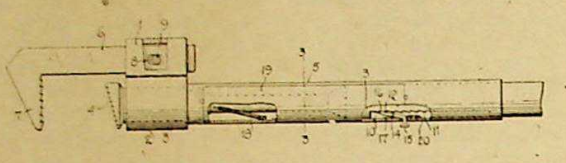
5. In an electric motor vehicle, the combination with a frame and wheeled supports at the front and rear ends thereof, including rear axle driving mechanism having a housing, of an electric motor having a casing, a rigid connection between the motor casing and said housing, a member fixed to and extending from the front end of the motor casing in line with the axle of the shaft for said motor, a universal joint arranged in front of said motor and comprising ball and socket members, the ball member being provided with a diametrically extending bearing to slidably and rotatably receive said member extending from said motor casing, and means for rigidly securing said socket member to said frame whereby said rear axle, motor and connections therebetween as a unit may swing in all directions relatively to the frame and move to and fro longitudinally of the frame.

[Claims 6 to 10 not printed in the Gazette.]

1,203,728. WRENCH. HARRY VERNON HAINES, Farrell, Pa. Filed July 24, 1916. Serial No. 111,062. (Cl. 81—177.)

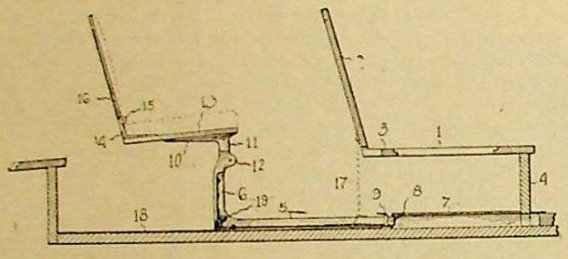
A wrench of the class described comprising a sleeve, a second sleeve extending therefrom and providing a handle member for the wrench, a shank slidably disposed through both of said sleeves and extending beyond the second sleeve, said shank being provided at its inner end with a jaw, a portion of the shank extending beyond the second

sleeve being adapted to be grasped to force said jaw of the shank into engagement with the work, a holding dog pivotally engaged with the second named sleeve and coacting with the shank for holding the same against movement in a direction away from the work, a retractile



member positioned within the sleeve and coacting with the shank to impart movement thereto in a direction away from the work when the holding dog is disengaged from the shank, and a second jaw operatively engaged with the first named sleeve.

1,203,729. AUXILIARY SEAT FOR VEHICLES. MORGAN J. HAMMERS, Detroit, Mich. Filed July 3, 1915. Serial No. 37,983. (Cl. 21—43.)

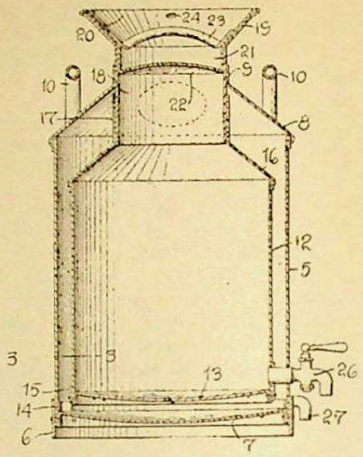


1. In a vehicle, the combination with the floor and a seat thereon having an opening in the back below the seat deck of, guides housed under the seat and disposed longitudinally of the vehicle, standards having forwardly extending arms in sliding engagement with the guiding means, a seat articulated to the standards to fold forward into an inverted position over the standard arms and to fold back on the standards into sitting position and a back articulated to the seat to fold downwardly onto the latter and rearwardly into sitting position, the standards resting on the portion of the floor back of the seat when extended and leaving that portion of the floor unimpeded and clear when telescoped with the guides.

2. In a vehicle, the combination with the floor a back seat and a front seat having an open back below the seat deck, of guiding members housed under the front seat extending rearwardly from the heel board, standards having forwardly extending arms in sliding engagement with the guides, a seat articulated to the rear upright end portions of the standards to fold downwardly into an inverted position at an interval above the standard arms and to turn back of the standards into sitting position and a back articulated to fold downwardly onto the seat and rearwardly into operative position, the standards resting on the portion of the floor back of the seat when extended and leaving that portion of the floor entirely unimpeded when telescoped with the guides.

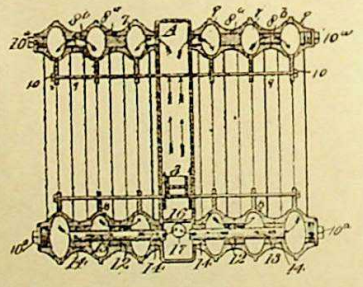
3. In a vehicle, the combination with a back seat and a front seat having an opening in the back thereof below the seat deck, of guiding means underneath the forward seat disposed longitudinally of the vehicle, L-shaped standards the horizontal portions of which are in sliding engagement with the guiding means, seat irons articulated on the upright portions of the standards by rule joints that break forwardly, a back frame and means articulating the back frame to the seat to swing forwardly onto the seat, the seat and attached parts when folded and moved forward on the guides, being housed completely by the front seat, the standards resting on the portion of the floor back of the seat when extended and leaving that portion of the floor entirely unimpeded when telescoped with the guides.

1,203,730. MILK-CAN. JOHN H. HARDCASTLE, Edenwold, Tenn. Filed Nov. 24, 1915. Serial No. 63,157. (Cl. 220—138.)



A container of the class described including an outer shell, an inner receptacle concentrically spaced from the wall of said shell, and a ring or annulus laterally spaced from the lower edge of the receptacle and tightly engaging against said outer shell, said annulus being offset at spaced points and fixed to the wall of the receptacle, said ring or annulus projecting below the bottom of the receptacle to support said receptacle with its bottom wall in spaced relation to the bottom wall of the shell.

1,203,731. RADIATOR. OTTO J. HARTFIELD, Oakland, Cal., assignor to Helen A. Hartfield, Los Angeles, Cal. Filed Dec. 27, 1915. Serial No. 68,725. (Cl. 126—91.)



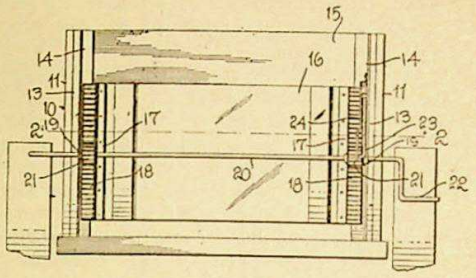
1. An air heater and radiator, consisting of a vertical, rectangular chamber, a heater located in the lower part of the chamber, heat radiating sections fixed in series at each side of the first-named chamber and having connecting passages at the top and alternately with the top and bottom of the following radiator sections, a chamber below the heater of the central chamber, tubular pipes extending from the outer radiator sections to said chamber, and a connected draft producing flue.

2. In an air heating and radiating apparatus of the character described, a vertically disposed central chamber and radiator sections located at each side having connecting passages alternately at the top and bottom, a heater located in the lower part of the central chamber, compartments below the heater, pipes connecting the exterior radiator sections with one of said compartments, an air inlet through the other compartment to the heater, and a draft flue connecting with the first named compartment.

1,203,732. END-GATE. AUGUST W. HASSELBRING, Barnum, Iowa. Filed Jan. 12, 1916. Serial No. 71,731. (Cl. 21—21.)

1. The combination with a wagon body including sides and having angle irons attached to the sides, each angle iron having an inwardly extending flange, of an end gate having angle irons attached to its face and flanges extend-

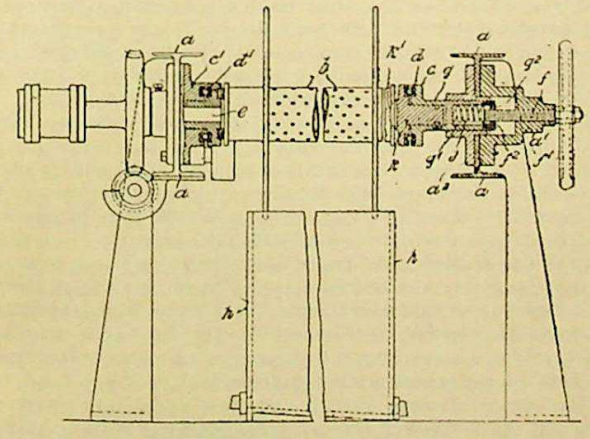
ing over and spaced from the face of the gate and extending over the inwardly projecting flanges of the angle iron guides, the flanges of the angle irons on the gate being formed with gear teeth, a shaft operatively supported upon the sides of the body, and gear wheels on said shaft engaging the said gear teeth.



2. The combination with a wagon body including sides and having angle irons attached to the sides, each angle iron having an inwardly projecting flange, of an end gate having irons attached to its face and formed with flanges extending over the flanges of the first named angle irons and formed with gear teeth upon their outer faces, a shaft operatively supported upon the sides of the body, gear wheels on said shaft engaging the gear teeth on the end gate irons, and a locking detent adapted to engage one of the gear wheels and hold the shaft from rotation.

3. The combination with a wagon body including sides and vertical cleats, of vertical angle irons disposed upon said cleats, an end gate section disposed behind the angle irons, irons mounted upon the face of the section and extending over the first-named angle irons and having sliding engagement therewith, the irons on the end gate section being formed with gear teeth, a shaft mounted upon the side walls of the body and having gear wheels intermeshing with the gear teeth on said irons, and a spring actuated pivoted detent operatively engaging with one of said gear wheels to prevent its rotation.

1,203,733. BEAM-CLAMPING DEVICE. ROBERT SMITH HEAP, Burnley, England. Filed Mar. 17, 1915. Serial No. 14,987. (Cl. 64—25.)

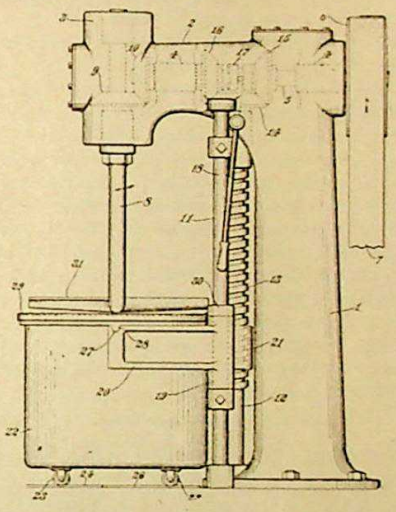


1. In a perforated beam machine for treating yarn, in combination with rotary disks between the faces of which the beam is clamped, a bearing box for one of said disks adapted to have lateral movement, a screw to effect said lateral movement whereby the beam is clamped in place or released, and a resilient device between said screw and bearing box whereby the thrust is transmitted to the beam without danger of injury to the latter.

2. In a perforated beam machine for treating yarn, in combination with rotary disks between the faces of which the beam is clamped, a bearing box for one of said disks adapted to have lateral movement, a screw to effect said lateral movement whereby the beam is clamped in place or released, and a helical spring between said screw and bearing box whereby the thrust is transmitted to the beam without danger of injury to the latter.

3. In a perforated beam machine for treating yarn, in combination with rotary disks between the faces of which the beam is clamped, a frame, a bearing box for one of said disks carried thereby and adapted to have lateral movement, a ball thrust bearing between said disk and bearing box, a screw to effect lateral movement of said bearing box and the disk carried thereby, and a spring between said screw and box, whereby the thrust is yieldingly transmitted to clamp the beam in place without binding of the bearing or injury to the beam.

1,203,734. DOUGH-PUNCHING MACHINE. ERNEST HEIDLAND and HERMAN HEIDLAND, St. Louis, Mo. Filed Nov. 22, 1915. Serial No. 62,904. (Cl. 107—7.)



1. A dough punching mechanism, comprising a dough receiving tub, a dough punching tool constructed and arranged to operate on fermented dough within said tub, and means for operating said punching tool.

2. A dough punching mechanism, comprising a dough receiving tub, a dough punching tool constructed and arranged to operate on fermented dough within said tub, and means for imparting rotary and reciprocatory motions to said tool and tub relatively.

3. A dough punching mechanism, comprising a dough receiving tub, a dough punching tool constructed and arranged to operate on fermented dough within said tub, and means for imparting a combined rotary and reciprocatory motion to said tool and tub relatively.

4. A dough punching mechanism, comprising a dough receiving tub, a driven shaft, a punching tool carried thereby and adapted to operate on fermented dough within said tub, and means for rotating said shaft and causing relative reciprocation of the latter and tub.

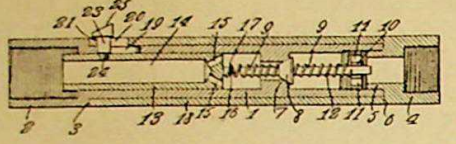
5. A dough punching mechanism, comprising a dough receiving tub, a machine embodying a driven shaft, a punching tool removably mounted on said shaft and adapted to operate within said tub, a cover for said tub movably mounted on said machine, means for holding the tub in operative relation to said machine, and means for operating said shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,203,735. LOCKING THROTTLE-HANDLE FOR PNEUMATIC TOOLS. WILLIAM JAMES HERRON, Wilkinsburg, Pa. Filed Jan. 17, 1916. Serial No. 72,541. (Cl. 136—11.)

1. A throttle handle embodying a tubular valve casing, a sleeve rotatable thereon, one of said parts having a cam slot with its forward end provided with a shoulder, a pin engaged with the other part and extending through said slot to normally move behind said shoulder, a normally seated valve in said casing, and a plunger slidable

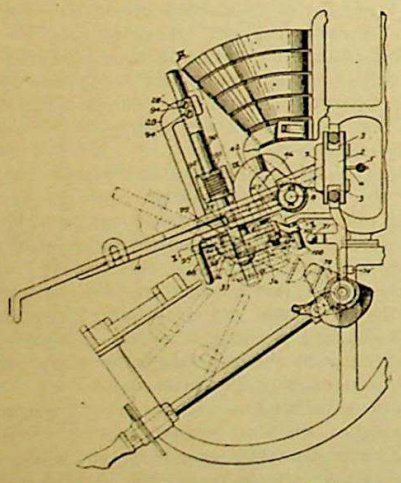
within the casing for unseating the valve, said plunger having a limited movement with respect to the valve before the valve is unseated, and said pin being secured to said plunger.



2. A throttle handle embodying a tubular valve casing, a sleeve rotatable thereon, one of said parts having a cam slot with its forward end provided with a shoulder, a pin engaged with the other part and extending through said slot to normally move behind said shoulder, a valve member within the casing, a plunger slidable within the casing for unseating said valve member, said pin being attached to said plunger, and a spring between the plunger and valve member for separating them.

3. A throttle handle embodying a tubular valve casing, a sleeve rotatable thereon, one of said parts having a cam slot with its forward end provided with a shoulder, a pin engaged with the other part and extending through said slot to normally move behind said shoulder, said casing having a valve seat, a valve seatable against said seat and having a stem, a plunger slidable within the casing and having a finger at one end to abut against said stem, the plunger having a bore extending from its other end to a point adjacent the first mentioned end and an aperture extending from said bore at one side of said finger, said pin being engaged with said plunger, and a coiled wire expansion spring between said valve and plunger upon said finger and stem.

1,203,736. AUTOMATIC DESPATCHING AND SELECTIVE DELIVERY APPARATUS. CHARLES P. HIDDEN, Brookline, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Mar. 17, 1915. Serial No. 15,038. (Cl. 186—16.)



1. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having stations therealong with carriers to travel on said track, means to propel said carriers, and actuating and controlling means, coacting with said carriers and propelling means, to automatically pick-up an article at any given station and unload said article at a predetermined one of a plurality of stations, said plurality of stations being disposed in groups and each of said stations having thereat at least one loading point having means to support an article to be despatched from said loading point, each of said loading points corresponding to one of said unloading stations in at least one of said groups of stations, said pick-up actuating and controlling means comprising elements adjacent said loading points for loading carriers while the latter ars passing said points and also means, independent of the load on a carrier, for preventing said elements from disturbing a load already in place upon a given carrier when such loaded carrier is passing said elements until said loaded carrier arrives at the group in which is the predetermined one of said stations at which said loaded carrier is to be unloaded said controlling means including load-controlled provisions for then permitting said carrier to be unloaded at a predetermined one of said stations.

2. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having stations therealong with carriers to travel on said track, means to propel said carriers, and actuating and controlling means, coacting with said carriers and propelling means, to automatically pick-up an article at any given station and unload said article at a predetermined one of a plurality of stations said plurality of stations being disposed in groups, and each of said stations having thereat at least one loading point having means to support an article to be despatched from said loading point, each of said loading points corresponding to one of said unloading stations in at least one of said groups of stations, said pick-up actuating and controlling means comprising elements adjacent said loading points for loading carriers while the latter are passing said points and also means preventing said elements from disturbing a load already in place upon a given carrier when such loaded carrier is passing said elements until said loaded carrier arrives at the group in which is the predetermined one of said stations at which said loaded carrier is to be unloaded and then permitting said carrier to be unloaded at a predetermined one of said stations, said actuating and controlling means further comprising group determining devices on said carriers and means for setting said devices.

3. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of stations therealong, arranged in groups, with carriers to travel on said track, each of said carriers having a pick-up element movably mounted thereon for substantially vertical movement to pick up articles to be conveyed, means to propel said carriers, and actuating and controlling means to control said pick-up elements and only adapted to co-act therewith to automatically load an empty carrier, as the latter passes any given station and to thereafter unload said carrier at a determined point along said track, said system having provisions, independent of the weight of any load, to positively prevent the emplacement of a load upon an already loaded carrier and to prevent the discharge of a loaded carrier at a station in any other than a predetermined one of said groups.

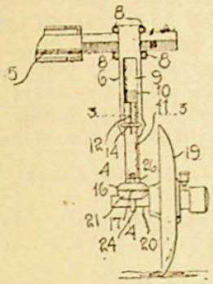
4. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of despatching stations and at least one receiving station, carriers each having a pick-up jaw movably mounted thereon and a jaw to co-act with that aforesaid to grasp an article between said jaws, means to propel said carriers along said track, and actuating cams at said despatching stations to cause said pick-up jaws to pick up articles, each of said carriers having a connection normally operatively disposed to transmit the action of said cams as the latter are encountered by a carrier to be loaded by one of said cams, means acting independently of the load to inoperatively dispose said connection upon said carrier, whereby to prevent a cam at a despatching station along the line of travel of an already loaded carrier *en route* to said receiving station, from disturbing the load upon said carrier, and means, including a device to operatively reset said connection and a cam at said receiving station to co-act with said connection when thus reset, to unload its carrier.

5. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of despatching stations and at least one receiving station, carriers each having a pick-up element movably mounted thereon, means to propel said carriers along said track, and actuating means to control said pick-up elements and only adapted to co-act therewith to automatically load an empty carrier, as the latter passes any given

station and to thereafter unload said carrier at a determined point along said track, said carriers having means, independent of any of the loads to be carried by said carriers, to prevent the emplacement of a load upon an already loaded carrier.

[Claims 6 to 45 not printed in the Gazette.]

1,203,737. CULTIVATOR-DISK MOUNTING. GUY W. HOAR, Bonesteel, S. D. Filed Mar. 20, 1916. Serial No. 85,465. (Cl. 97—37.)



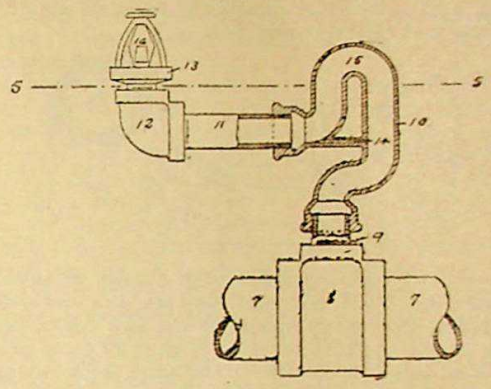
1. A cultivator disk mounting including a relatively stationary upper standard section provided with a longitudinal channel, a lower standard section having a longitudinally split upper end engaged in the channel of said upper section, means mounted in said upper standard section to embrace the lower standard section and contract the split portions thereof, said standard sections being provided with means for interlocking engagement with each other to prevent rotation of the lower standard section with respect to the upper section, and means for mounting a cultivator disk axle upon said lower standard section.

2. A cultivator disk mounting including a relatively stationary upper standard section provided with a longitudinal channel, a lower standard section having a longitudinally split upper end engaged in the channel of said upper section, means mounted in said upper standard section to embrace the lower standard section and contract the split portions thereof, said standard sections being provided with means for interlocking engagement with each other to prevent rotation of the lower standard section with respect to the upper section, said lower standard section being provided upon its lower end with a laterally projecting plate, a cultivator disk axle, a clamping plate seated upon said axle, an eye-bolt to receive the disk axle, the bottom face of said plate being recessed to receive the eye of the bolt, the bolt shank extending upwardly through said plate and in a coinciding opening in the plate on the lower standard section, said plates being provided upon their opposed faces with interlocking teeth, and a clamping nut threaded upon the upper end of the bolt.

3. A disk mounting for cultivators including a relatively stationary upper standard section having a longitudinally extending channel and longitudinal spaced teeth formed on the wall of said channel, a lower shaft section fitted into said channel and also having longitudinal teeth formed thereon for interlocking engagement with the teeth on the wall of said channel, an eye-bolt engaged upon the lower standard section and having its ends disposed through an opening in the upper section and provided with a tightening nut, and means for detachably and adjustably mounting a disk axle upon the lower standard section to angularly position the cultivator disk with respect to the standard.

1,203,738. COMBINED WATER-HEATING AND SPRINKLER SYSTEM. WILLIS K. HODGMAN, Taunton, Mass. Filed Mar. 4, 1916. Serial No. 82,224. (Cl. 169—20.)

1. The combination in a combined circulatory water heating and sprinkler system, of a pipe for the circulation of heating water, a branch pipe in communication with the circulation pipe having an outlet normally closed by a sprinkler head, said branch pipe comprising a fluid conducting passage arranged to conduct fluid successively upwardly and downwardly to said head and a by-pass of realtively small dimension connecting the ends of said passage to shunt fluid flow therefrom and admitting fluid to both ends of the passage to form an air seal therein.



2. The combination in a combined circulatory water heating and sprinkler system, of a pipe for the circulation of heating water, a branch pipe in communication with the circulation pipe, an outlet therefrom normally closed by a sprinkler head, said branch pipe including a trap intermediate the ends thereof providing an air chamber, said trap having an intake from the circulation pipe and an outlet leading to said sprinkler head, and means providing for fluid seepage between the intake to and outlet from said trap.

3. The combination in a combined circulatory water heating and sprinkler system, of a pipe for the circulation of heating water, an offset in communication with the circulation pipe terminating in a dead end and having a sprinkler head attached to said dead end, said offset providing a chamber adjacent said sprinkler head and communications from said pipe to said chamber including a passage of relatively large dimensions leading circuitously to said chamber by a path extending above the level of the same and of said circulation pipe and also including a seepage passage opening to said chamber from the intake end of said large passage.

4. The combination in a combined circulatory water heating and sprinkler system, of a pipe for the circulation of heating water, an offset in communication with the circulation pipe terminating in a dead end and having a sprinkler head attached to said dead end, said offset providing a chamber adjacent said sprinkler head and communications from said pipe to said chamber including a passage of relatively large dimension leading circuitously to said chamber by a path extending above the level of the same and of said circulation pipe and also including a seepage passage opening to said chamber adjacent the bottom thereof and to the intake end of said large passage whereby it will serve to drain the said chamber.

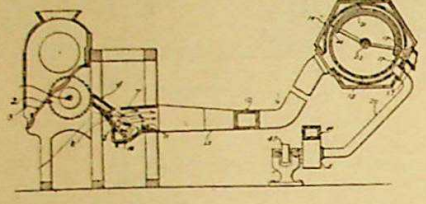
5. The combination in a combined circulatory water heating and sprinkler system, of a pipe for the circulation of heating water, an offset in communication with the circulation pipe terminating in a dead end and having a sprinkler head attached to said dead end, said offset providing a chamber 11 adjacent the sprinkler head and an upwardly looped passage 10 to the chamber from the pipe and means 14 permitting seepage of water from the circulation pipe to said chamber upon gradual escape of air therefrom, the entrance of water to said chamber acting to close the main fluid passage through said offset and preventing transmission of heat to the sprinkler head by convective fluid movement.

[Claims 6 and 7 not printed in the Gazette.]

1,203,739. COTTON GINNING, CLEANING, AND BLEACHING MECHANISM. WESLEY A. J. HODO, Cleburne, Tex. Filed Apr. 18, 1916. Serial No. 91,862. (Cl. 13—9.)

1. In a cotton gin provided with a gang of saws, means for stripping the lint from the saw teeth, consisting of a

suction nozzle terminating in close proximity to the path of the saw teeth, and having the upper and lower walls parallel to each other, the passage through said nozzle being straight and uniform, a cleaning chamber communicating with said nozzle, a lint flue leading from said chamber, and means for causing a draft of air through said nozzle and chamber and flue.



2. In a cotton gin provided with a gang of saws having unobstructed air passages between the saws, means for stripping the lint cotton from the saw teeth, consisting of a nozzle co-extensive with a gang of saws and terminating in close proximity to the saws, and having the upper and lower walls parallel to each other, the passage through said nozzle being straight and of shallow depth and uniform, and means for causing a suction draft through said nozzle.

3. In a cotton gin provided with a gang of saws having unobstructed air passages between the jaws, means for stripping the lint cotton from the saws, consisting of a nozzle having the receiving end terminating in close proximity to the saw and having its upper and lower walls parallel to each other, and having an off-set at its discharge end, an enlarged chamber commencing at said off-set and being co-extensive in width with said nozzle and means for causing a suction draft through said nozzle.

4. In a cotton gin provided with a gang of saws having unobstructed air passages between the saws, means for stripping the lint cotton from said saws consisting of a nozzle having its receiving end terminating in close proximity to the saws, a relatively large cleaning chamber co-extensive in width with said nozzle, and a baffle in line with said nozzle on the side of said chamber opposite the nozzle, a lint flue in communication with said cleaning and purifying chamber and means for causing an air current through said nozzle and chamber and flue.

5. In a cotton gin provided with a gang of saws, means for stripping lint cotton from the saws consisting of a suction fan provided with an exhaust, a nozzle having its receiving end terminating in close proximity to said teeth, a lint flue in communication with said nozzle and with said fan, and an enlarged closed chamber between said nozzle and said flue and communicating with the nozzle and flue and means in connection with said chamber and flue for causing a revolving motion of the draft and cotton.

[Claims 6 to 14 not printed in the Gazette.]

1,203,740. PROCESS OF GRANULATING NITRATE OF LIME AND SIMILAR SUBSTANCES WITHOUT DEPHLEGMATION AND DUST. ALFRED HOLTER, Rjukan, Norway, assignor to Norsk Hydro-elektrisk Kvælstofaktieselskab, Christiania, Norway. Filed Jan. 6, 1914. Serial No. 810,661. (Cl. 23—13.)

1. The process of granulating nitrate of lime and similar fertilizing substances without the formation of powder, which consists in forming a melt of the substance, and when the substance is in condition for crystallization producing granules or drops thereof of crystalline consistency, and effecting the hardening of such drops by causing them to move freely through an inert gaseous atmosphere.

2. The process of granulating nitrate of lime and the like without the formation of powder, which consists in forming a melt thereof, and when sufficiently concentrated for crystallization producing granules or drops of said molten salt, and causing such drops to move freely in a counter current with a suitable inert gas.

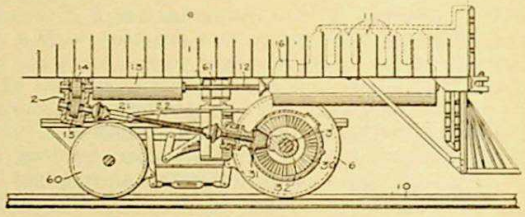
3. The process of granulating nitrate of lime and the like without the formation of powder, which consists in forming a melt thereof, and when sufficiently concentrated for crystallization producing granules or drops of said molten salt and causing such drops to move freely in counter current with air.

4. The process of granulating nitrate of lime and the like without the formation of powder, which consists in forming a melt thereof, and when in condition for crystallization producing granules or drops of said molten salt, and causing such drops to move freely in counter current with a suitable inert gas, said gas being maintained in circulation.

5. The process of granulating nitrate of lime and the like without the formation of powder, which consists in forming a melt thereof, and when in condition for crystallization producing granules or drops of said molten salt, and causing such drops to move freely in counter current with a suitable inert gas, said gas being maintained in circulation while being cooled.

[Claims 9 to 11 not printed in the Gazette.]

1,203,741. MOTOR-DRIVEN CAR. JAMES F. HOWIE, Seattle, Wash. Filed July 3, 1916. Serial No. 107,227. (Cl. 105—227.)



1. The combination with a car body and a supporting truck therefor, of a motor driven main shaft journaled on the car body and extending lengthwise the car, an angularly placed stub shaft also journaled on the car body, bevel gears connecting said stub shaft with the main shaft, a second stub shaft alined with the first and journaled on the truck, bevel gears connecting said second stub shaft with an axle of the truck, an intermediate shaft and universal couplings connecting said intermediate shaft with the stub shafts.

2. The combination with a car body and a supporting truck therefor, of a motor driven main shaft journaled on the car body and extending lengthwise the car, an angularly placed stub shaft also journaled on the car body, bevel gears connecting said stub shaft with the main shaft, a second stub shaft alined with the first, a bearing support for said latter stub shaft containing a universal coupling and having a fore-and-aft swinging support from the car body.

3. A motor car drive comprising a motor mounted on the car body, a shaft driven by said motor and extending lengthwise the car body, a supporting truck under the motor end of the car, said truck having a pivoting connection with the car body, a multiple-part shaft having a driving connection with one axle of the truck and with the shaft carried by the car body, universal couplings connecting the parts of said shaft, and a bearing for the part of said shaft which is connected with the axle containing a universal coupling and a support therefor permitting a limited movement lengthwise the car.

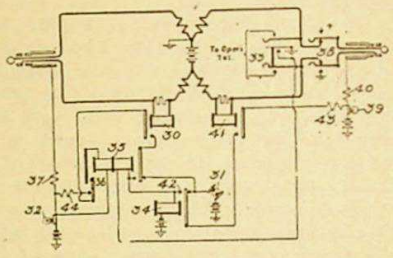
4. A motor car drive comprising a motor mounted on the car body, a shaft driven by said motor and extending lengthwise the car body, a supporting truck under the motor end of the car, said truck having a pivoting connection with the car body, a multiple-part shaft having a driving connection with one axle of the truck and with the shaft carried by the car body, universal couplings connecting the parts of said shaft, one section of said shaft being composed of extensible members.

5. A motor car drive comprising a motor mounted on the car body, a shaft driven by said motor and extending lengthwise the car body, a supporting truck under the motor end of the car, said truck having a pivoting connection with the car body, a multiple-part shaft having a driving connection with one axle of the truck and with

the shaft carried by the car body, universal couplings connecting the parts of said shaft, the central section of said shaft being composed of telescoping members.

[Claims 6 to 10 not printed in the Gazette.]

1,203,742. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor to Western Electric Company, Incorporated, of New York, N. Y., a Corporation of New York. Filed Dec. 1, 1915. Serial No. 64,430. (Cl. 179—72.)



1. A telephone exchange system comprising a plurality of telephone lines extending from substations to the central office, a link circuit thereat for interconnecting said lines, a supervisory relay associated with the link circuit and adapted to be controlled from a connected substation, a supervisory signaling device, a listening key associated with the link circuit, a second relay energized by the actuation of the listening key, a locked circuit therefor closed by its energization, the deënergization of the supervisory relay causing the deënergization of the second relay, and an interrupter brought into operative relation with the supervisory signaling device by the subsequent energization of the supervisory relay to cause the signaling device to furnish an intermittent signal.

2. A telephone exchange system comprising a plurality of telephone lines extending from substations to the central office, a link circuit thereat for interconnecting said lines, a supervisory signaling device, a supervisory relay associated with the link circuit and controlled from a connected substation, a listening key associated with the link circuit, a second relay energized by the actuation of the listening key, a locking circuit therefor closed by its energization and including a contact of the operated supervisory relay, the deënergization of the supervisory relay causing the deënergization of the second relay, and an interrupter brought into multiple relation with the supervisory signaling device by the subsequent energization of the supervisory relay when the second relay is deënergized to cause the signaling device to furnish an itnermittent signal.

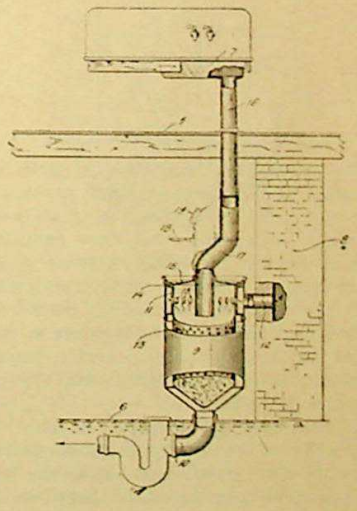
3. A telephone exchange system comprising a plurality of telephone lines extending from substations to the central office, a link circuit thereat for interconnecting said lines, a supervisory relay associated with the link circuit and adapted to be controlled from a connected substation, a second relay, an interrupter, a supervisory signaling device, said supervisory relay operating upon connection of the link circuit with a calling telephone line to operatively associate the interrupter with the signaling device thereby causing said signaling device to furnish an intermittent signal, a listening key, actuation thereof causing the energization of the second relay to interrupt the operative association of the signaling device and the interrupter, and a locking circuit for the second relay closed by the energization thereof, the deënergization of the supervisory relay causing the deënergization of the second relay and a subsequent energization of the supervisory relay operatively associating the interrupter and signaling device to cause the signaling device to furnish an intermittent signal.

4. A telephone exchange system comprising a plurality of telephone lines extending from substations to a central office, a link circuit thereat for interconnecting said lines, a supervisory relay associated with the link circuit and adapted to be controlled from a connected substation, a second relay, an interrupter, a supervisory signaling device, said supervisory relay operating upon connection of the link circuit with a calling telephone line to operatively associate the interrupter with the signaling device thereby causing said signaling device to furnish an intermittent signal, and a listening key, actuation thereof causing the energization of the second relay to interrupt the operative association of the signaling device and the interrupter.

5. A telephone exchange system comprising a calling and called telephone line extending from substations to a central office, a link circuit thereat interconnecting said lines, a uspervisory relay associated with each end of the link circuit and adapted to be controlled from the respective connected substations, a supervisory signaling device, a listening key associated with the link circuit, a second and a third relay energized by the action of the listening key, a locking circuit for the second and third relays closed by the energization ofthe second relay when the supervisory relay associated with the answering end of the link circuit is energized, a second locking circuit for the third relay closed by the energization of the supervisory relay associated with calling end of the link circuit, and an interrupter brought into operative relation to the signaling device by the deënergization of the supervisory relays and the subsequent energization of the supervisory relay associated with the calling end of the link circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,203,743. GARBAGE-DISPOSAL APPARATUS. NELS C. JOHNSON, Racine, Wis. Filed Jan. 26, 1916. Serial No. 74,291. (Cl. 193—32.)

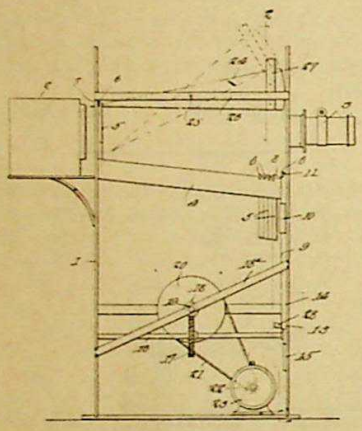


1. A garbage disposal apparatus comprising an outer casing, a drain member for said casing, a receptacle detachably positioned in the casing and spaced from the wall thereof, the lower portion of said receptacle being perforated and the upper portion of the receptacle being provided with a series of openings, an annular partition in the outer casing between said series of openings and the perforated portion of the receptacle, an air duct extending from the outer casing above said partition and a drain pipe extending into the receptacle and terminating below the level of the said series of openings in the upper portion thereof.

2. A garbage disposal apparatus comprising a receptacle, a drain extending from said receptacle and a drain pipe extending substantially vertically above the receptacle, and comprising an upper section and a lower section having its upper portion slidable telescopically engaging the upper section and having its lower portion offset to engage in the receptacle, and a receptacle cover carried by the lower offset portion whereby upon lifting the lower section and rotating it with respect to the upper section, the cover will be disposed laterally of the receptacle.

3. A garbage disposal apparatus comprising an outer casing, a drain at the bottom of the casing, an annular plate disposed in the upper portion of the casing and provided with a series of perforations, outwardly directed flanges at the edge portions of said plate secured to the casing and forming therewith and with the plate, an annular chamber, a receptacle adapted to fit within the annular plate, said receptacle having its lower portion perforated and having provided at its upper portion with a series of openings, adapted to aline with the openings of the plate, an air duct extending from the said annular chamber and a drain pipe extending into the receptacle and terminating below the level of the said series of openings at the upper portion thereof.

1,203,744. SLIDE-PRESENTING MACHINE. WALLACE C. JOHNSON, Nevada, Mo., assignor of one-fourth to Dixie L. Haggard and one-fourth to Joe E. Haggard, Kansas City, Mo., and one-fourth to Wilson J. Cecil, Nevada, Mo. Filed Oct. 18, 1915. Serial No. 56,576. (Cl. 88—28.)



1. In a slide presenting machine, a pair of inclined rails, a second pair of reversely inclined pivotally mounted rails above the aforesaid rails, a series of slide carriers between and slidably engaging the first mentioned rails, and means for elevating the slide carriers one at a time from the lower ends of the first mentioned rails onto the upper ends of the second mentioned rails, said means swinging the second mentioned rails when a slide carrier is being elevated to deposit a slide carrier from the lower ends of the second mentioned rails onto the upper ends of the first mentioned rails.

2. In a slide presenting machine, a pair of inclined rails, a second pair of reversely inclined rails pivotally mounted above the first mentioned rails, the second mentioned rails being pivotally mounted between their ends, a yoke connecting the second mentioned rails, a series of slide carriers suspended between and slidably engaging the first mentioned rails, and means for elevating the carriers one at a time from the lower ends of the first mentioned rails onto the upper ends of the second mentioned rails, said means swinging the upper ends of the second mentioned rails upwardly when a carrier is being elevated, so that a carrier upon the lower ends of the second mentioned rails is released and deposited upon the upper ends of the first mentioned rails.

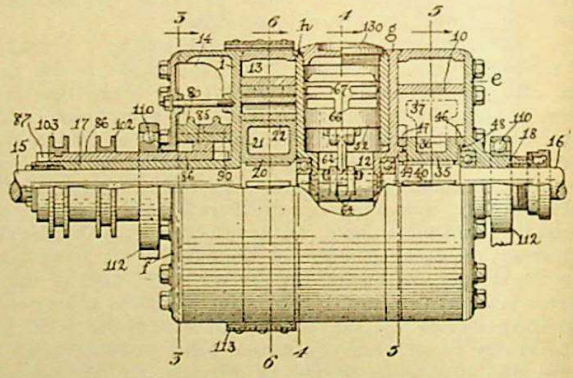
3. In a slide presenting machine, a pair of inclined rails, a second pair of reversely inclined pivotally mounted rails above the first mentioned rails, a series of slide carriers slidably mounted upon the first mentioned rails, means for elevating the carriers one at a time from the lower end of the first mentioned rails so that the carriers engage and swing the second mentioned rails, the second mentioned rails being swung so that the carriers are deposited thereon, and so that a carrier upon the lower ends thereof is deposited upon the upper ends of the first mentioned rails.

4. In a slide presenting machine, a pair of inclined rails, a second pair of reversely inclined rails pivotally mounted between their ends above the first mentioned rails, a yoke connecting the second mentioned rails, a series of slide carriers disposed between the first mentioned rails and having portions to slide upon both pairs of rails, and means for elevating the slide carriers one at a time from the lower ends of the first mentioned rails so that they strike and raise the upper ends of the second mentioned rails, and so that the upper ends of the second mentioned rails swing under said portions of the carriers, the second mentioned rails when swung depositing a carrier from the lower ends thereof onto the upper ends of the first mentioned rails.

5. In a slide presenting machine, a pair of inclined rails, a second pair of reversely inclined rails pivotally mounted between their ends above the first mentioned rails, a series of slide carriers disposed between and slidably engaging the first mentioned rails and adapted to slidably engage the second mentioned rails, a vertically movable elevator adjacent the lower ends of the first mentioned rails, and means for operating the elevator, the elevator when lowered being adapted to receive one carrier from the first mentioned rails, and when raised to carry said carrier past the upper ends of the second mentioned rails so that the carrier is deposited upon the upper ends of the second mentioned rails, the second mentioned rails being swung when the elevator is raised to deposit a carrier from the lower ends of the second mentioned rails onto the upper ends of the first mentioned rails.

[Claims 6 to 10 not printed in the Gazette.]

1,203,745. FLUID TRANSMISSION. FREDERICK O. KILGORE, Somerville, Mass. Filed Oct. 22, 1912. Serial No. 727,156. (Cl. 138—22.)



1. In an apparatus of the character described, in combination, a driving shaft, a driven shaft, a casing for containing fluid, a rotatable driven member within said casing concentric with said driven shaft and connected thereto and provided with a plurality of radially movable devices for the fluid to act on and effect rotation of said driven member and the driven shaft, a rotatable driving member within said casing concentric to and connected with the driving shaft and provided with a plurality of movable devices to effect movement of said fluid, and expansible and contractible means located in said casing and coöperating with the movable devices of said driving member to render them ineffective upon said fluid, and to permit them to become effective thereon.

2. In an apparatus of the character described, in combination, a driving shaft, a driven shaft, a casing for containing fluid, a rotatable driven member within said casing concentric with said driven shaft and connected thereto and provided with a plurality of movable devices for the fluid to act on and effect rotation of said driven member and the driven shaft, a rotatable driving member within said casing concentric with the driving shaft and connected thereto and provided with a plurality of movable devices to effect movement of said fluid, expansible and contractible means coöperating with the movable devices of said driving member to render them ineffective upon said fluid and to permit them to become effective

thereon, and means for controlling the direction of movement of the fluid to enable the latter to rotate the driven member in opposite directions.

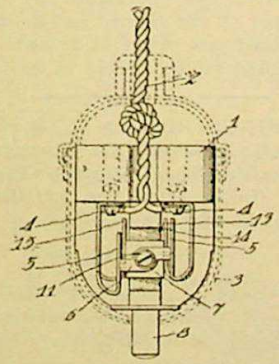
3. In an apparatus of the character described, in combination, a driving shaft, a driven shaft, a casing for containing a fluid, a rotatable driven member within said casing concentric with said driven shaft and connected thereto and actuated by said fluid to effect rotation of said driven shaft, a rotatable driving member within said casing concentric with said driving shaft and connected therewith to be rotated thereby, and expansible and contractible means within said casing and coöperating with said driving member to permit the same to become effective on said fluid to cause the latter to act on the driven member, and to render said driving member ineffective upon said fluid.

4. In an apparatus of the character described, in combination, a driving shaft, a driven shaft, a rotatable driven member concentric with said driven shaft and connected thereto, a rotatable driving member concentric with said driving shaft and connected thereto, a rotatable casing for containing a body of fluid coöperating with said driving and driven members to enable said fluid to be set in motion by said driving member and actuate said driven member to rotate the same, means within said casing for controlling the action of said driving member on said fluid, and means for holding said casing from rotating while the fluid is being circulated by said driving member to effect rotation of said driven member.

5. In an apparatus of the character described, in combination, a rotatable casing for containing a fluid, a driving member located in said casing and capable of being expanded and contracted, means rotatable with said casing for contracting said driving member, and a driven member located within said rotatable casing and actuated by said fluid.

[Claims 6 to 11 not printed in the Gazette.]

1,203,746. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 7, 1911. Serial No. 648,035. (Cl. 175—291.)



1. In combination, two members having yielding engagement with each other and being relatively movable bodily, one of said members being also rotatable, and means for engaging and causing partial rotation of said rotatable member when said members are moved relatively, said rotatable member being so shaped that after partial rotation said other member causes further rotation.

2. In an electric switch in combination, a rotatable actuating member, a yielding member bearing against the periphery thereof, coöperating engaging means on said members whereby relative bodily movement of said members will cause the engagement of said means and thereby rotate said rotatable member and throw it ahead after a predetermined movement.

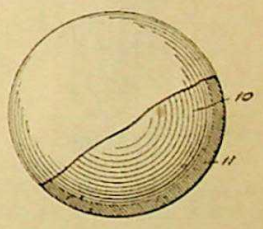
3. In an electric switch, in combination, a rotatable member having peripheral faces meeting at angles whereby corner shoulders are formed, a member having a catch, said members being relatively movable back and forth and one being biased toward the other, and means for causing such relative movement, said catch being arranged to engage one of said shoulders during said movement whereby said engagement causes a partial rotation of said rotatable member, and said biased member snapping against the other to complete said partial rotation.

4. In a snap movement, in combination, a rotatable member having peripheral faces meeting at an angle with each other whereby shoulders are formed, a projecting catch, means for causing a relative movement of translation of said elements, said catch being arranged to engage one of said faces during said relative movement whereby said engagement causes a partial rotation of said member, and a yielding device impelled toward said member which snaps against the aforesaid face after said partial rotation permits said face to be presented thereto.

5. A polygonal rotatable actuating member having substantially flat faces, a relatively reciprocable yielding member pressing against whatever face is adjacent thereto, and means associated with said yielding member adapted to engage said rotatable member and impart thereto a successive step by step rotation in one direction when one of said members is reciprocated relatively to the other, said yielding member being moved away from the axis of rotation of said actuating member at the beginning of each of said steps whereby it may snap inwardly at the end of each step and throw said rotatable member ahead.

[Claims 6 to 34 not printed in the Gazette.]

1,203,747. COMPOSITION BOWLING-BALL. PAUL J. KLOPSCH, Bayonne, N. J. Filed Nov. 26, 1915. Serial No. 63,454. (Cl. 46—4.)



1. A composition bowling ball, comprising a core and a shell tightly inclosing the said core, the latter consisting of a cementitious mass and a filler and the shell consisting of a condensation product of carbolic acid and formaldehyde.

2. A composition bowling ball, comprising a core and a shell tightly inclosing the said core, the core consisting of a mixture of a solution of chlorid of magnesia, oxid of magnesia and a filler, and the shell consisting of a condensation product of carbolic acid and formaldehyde.

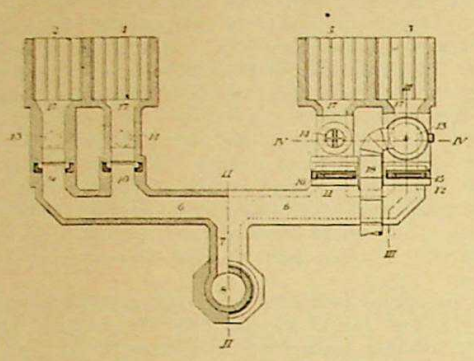
3. A composition bowling ball, comprising a core and a shell tightly inclosing the said core, the latter consisting of equal parts of chlorid of magnesia and oxid of magnesia, and a light filling material, and the said shell consisting of a condensation product of carbolic acid and formaldehyde.

4. A composition bowling ball, comprising a core and a hard baked shell tightly inclosing the said core, said core consisting of equal parts of chlorid of magnesia and oxid of magnesia and approximately twenty per cent. of a comminuted fibrous filling material.

1,203,748. FLUE AND VALVE ARRANGEMENT FOR REVERSING REGENERATOR-FURNACES. LUTHER L. KNOX, Avalon, Pa., assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 6, 1914, Serial No. 849,280. Renewed Feb. 13, 1915. Serial No. 8,075. (Cl. 158—7.5.)

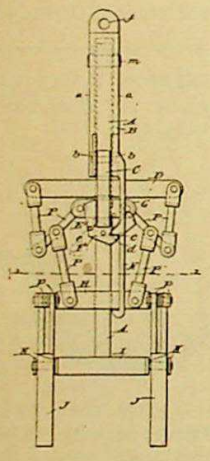
In a flue and valve arrangement for regenerative furnaces, the combination of air and gas regenerators, a stack flue running transversely of the regenerators, a continuous port connecting each of the regenerators with

said stack flue, said ports being at the same level as the stack flue and all opening directly into the same side of said flue, each port having an admission valve in its



upper wall, and each port also having a vertically movable damper between said valve and the stack flue; substantially as described.

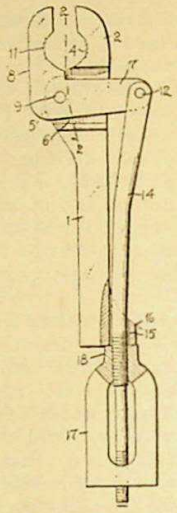
1,203,749. AUTOMATIC CATCH AND CARRYING MACHINE. PETER KUZNOR, New Castle, Pa. Filed Apr. 20, 1916. Serial No. 92,547. (Cl. 57—9.)



1. The combination in an automatic catch and carrying machine, of the hoisting hooks C C, the movable bar D, the stationary bar G, located beneath the said bar D, and provided with receiving apertures *n n*, on opposite sides thereof, the casing, or tube B, provided with slots *a a*, therein, the stationary bar I, vertical shaft A, the latter mortised centrally at its base in the bar I, and having its upper end inclosed in the tube B, and equipped with the transverse stop-pin *m*, at its upper end, projecting into said slots in said tube, with the horizontal bars D and H, acting vertically on said shaft, the stationary bars G and I, the rod N, provided with two catches, the shields E, and E¹, manipulated by said rod N, by means of said catches thereon, in contact with the knob, or handle *d*, on the smaller arm of said shield E, the stationary bars K K, centrally attached to the ends of said bar I, and at right angles thereto, the gripping jaws J J J J, pivoted in the ends of said bars K K, the tongues M M, mortised in said bars K K, the systems of levers P P P P, and *p p p p*, the first pivoted to the bars G H and D, the latter to the bar H, and the upper ends of said jaws, all as substantially herein described.

2. The combination in an automatic catch and carrying machine, of the blocks F F, and the shields E, and E¹, the manipulating rod N, provided with upper and lower catches, in juxtaposition to the handle *d*, on the smaller arm of said shield E, for manipulating said shields, E, and E¹, with the hooks C C, the stationary bar G, having the apertures *n n*, for the reception of said hooks, the bar D, tube B, and vertical shaft A, all as herein particularly set forth.

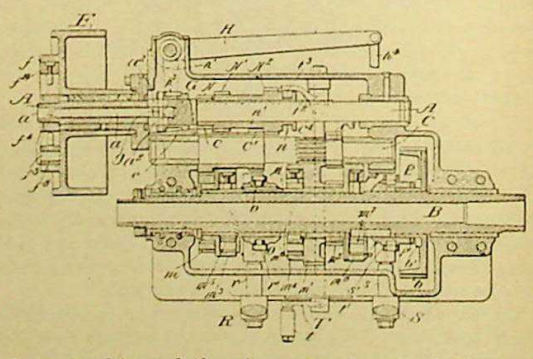
1,203,750. WRENCH. IVER A. LARSON, Gatzke, Minn. Filed Apr. 12, 1916. Serial No. 90,696. (Cl. 81—111.)



1. A wrench comprising an elongated member provided at one end with a stationary jaw and at its opposite end with a lateral extension provided with on opening, a jaw pivotally mounted upon the elongated member and movable relative to the stationary jaw, a lateral arm carried by the pivoted jaw, a rod pivotally engaged with the arm and extending through the lateral extension of the elongated member, and an operating member in threaded engagement with the operating rod and engageable with the outer face of the lateral extension.

2. A wrench comprising an elongated member provided at one end with a stationary jaw and at its opposite end with a lateral extension provided with an opening, a jaw ivotally mounted upon the elongated member and movable relative to the stationary jaw. a lateral arm carried by the pivoted jaw, a rod pivotally engaged with the arm and extending through the lateral extension of the elongated member, and an operating member in threaded engagement with the operating rod and engageable with the outer face of the lateral extension, said stationary jaw and pivoted jaw being of arcuate formation and having their opposed ends concave in cross section.

1,203,751. GEARING. RICHARD K. LE BLOND and WILLIAM F. GROENE, Cincinnati, Ohio, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 12, 1913. Serial No. 760,670. (Cl. 74—58.)



1. In a machine of the character described, the combination of a drive shaft, driving means for said shaft, a spindle, shiftable gearing connection between the drive shaft and spindle, means for operatively connecting and disconnecting the drive shaft with its driving means, and means acting when the drive shaft is disconnected from its driving means to stop rotation of the gearing connecting the drive shaft and spindle.

2. In a machine of the character described, the combination of a drive shaft and its driving means, a spindle,

an intermediate shaft between the drive shaft and spindle, shiftable gearing connection between the drive shaft, intermediate shaft and spindle for transmitting motion of the drive shaft in different speeds to the spindle, means for disconnecting the drive shaft from its driving means, and means for stopping the operation of the gearing connection between the said shafts when the driving means is disconnected from the drive shaft to prevent overrunning.

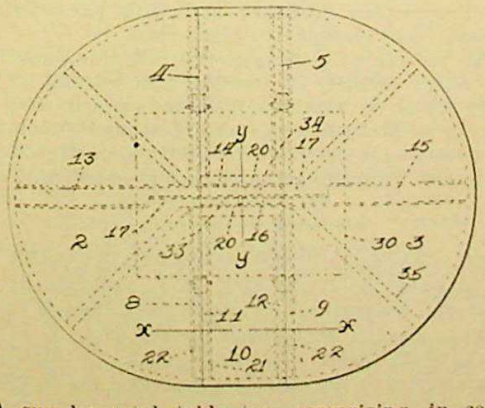
3. In a machine of the character described, the combination of a drive shaft and its driving means, a cluster of shifting gears on the drive shaft, an intermediate shaft having a series of gears selectively engageable with the gears on the drive shaft, a spindle, selectable gearing connection for rotating the spindle from the intermediate shaft, means for detachably connecting the driving means with the drive shaft, and means acting to arrest rotation of the cluster of shiftable gears when the driving means is disconnected from the drive shaft to permit the shiftable gears to be shifted for changing speed as soon as the driving means is operatively disengaged from the drive shaft without loss of time.

4. In a machine of the character described, the combination of a drive shaft, an intermediate shaft, a spindle, and a back shaft, selective gearing connection between the drive shaft and intermediate shaft, a sleeve on the spindle revoluble independently thereof, means for detachably locking the sleeve to the spindle, loose connection between the intermediate shaft and sleeve. means for rendering said gearing connection functionally operative or inoperative, permanent gearing connection between the sleeve and back shaft, and loose gearing connection between the spindle and back shaft, and means for rendering said gearing connection functionally operative.

5. In a machine of the character described, the combination of a driving shaft, a sleeve splined thereon, a cluster of gears fast thereto, an intermediate shaft, a plurality of gears fast thereon, means for moving the cluster of gears on the driving shaft to cause selective engagement between gears on the driving shaft and intermediate shaft, a spindle, a sleeve on the spindle independently revoluble thereof, gears on the sleeve independently revoluble thereof and in continual mesh with gears on the intermediate shaft, locking means between the sleeve and gears that they may be caused to revolve with the sleeve, a gear fast to the sleeve, a gear loose on the spindle, means to cause the sleeve or the loose gear to revolve with the spindle, and a back shaft with gears fast thereon and in continual mesh with the gear fast to the sleeve and the gear normally loose on the spindle respectively, whereby fine changes of speed may be secured from the driving shaft and varying speeds may be imparted to the spindle.

[Claims 6 to 8 not printed in the Gazette.]

1,203,752. SUPPLEMENTAL TABLE-TOP. EUGENE J. LE CLAIRE, St. Paul, Minn. Filed Oct. 22, 1915. Serial No. 57,241. (Cl. 45—31.)

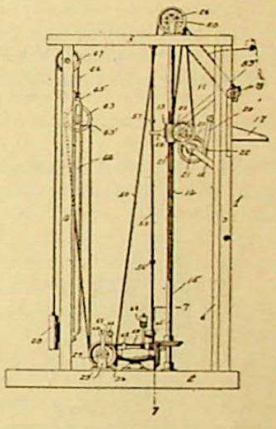


1. A supplemental table top, comprising, in combination, top sections having cleats along their meeting edges mortised together, said cleats having longitudinal grooves in their opposite sides and clamps having bail hooks engaging said cleats in said grooves and adapted to hold said sections together upon a table.

2. A supplemental table top, comprising, in combination, top sections having cleats secured thereto along their longitudinal meeting edges provided with interlocking faces and additional cleats secured at an angle to said first mentioned cleats having projecting intermeshing tongues slidably disposed with respect to one another and with respect to said first mentioned cleats.

3. A supplemental table top, comprising, in combination. top sections having cleats secured thereto along their longitudinal meeting edges having mortised intermeshing faces, and additional cleats secured at an angle to said first mentioned cleats having projecting intermeshing tongues.

1,203,753. SPLITTING-MACHINE. CHRIS LETIN, San Francisco, Cal. Filed May 5, 1915. Serial No. 25,957. (Cl. 17—30.)



1. A carcass splitting machine comprising a power shaft, a reciprocating knife adapted to be indirectly connected to and driven by said shaft, blocks for carrying the weight of the carcass, said blocks being actuated by said shaft whereby they are moved apart as said knife moves through the carcass.

2. A carcass splitting machine comprising a power shaft, a reciprocating knife adapted to be indirectly connected to and driven by said shaft, blocks for supporting the carcass disposed on each side of the knife, mechanism actuated by said shaft for causing a relative vertical movement between said knife and its supporting blocks and other means driven by said shaft for causing the outward movement of said blocks in opposite direction as said knife moves through the carcass.

3. A carcass splitting machine comprising a power driven shaft, a knife frame, a knife indirectly connected to and actuated by said shaft and adapted to be reciprocated thereby within said frame, guide ways on each side of said knife disposed at right angles to the movement of said knife, mechanism driven by said shaft for causing a relative vertical movement between the knife frame and the guide ways, blocks carried by said guide ways for supporting the carcass to be split, the said blocks being indirectly connected to the shaft in such a manner as to cause the outward movement thereof in opposite direction as the knife moves through the carcass.

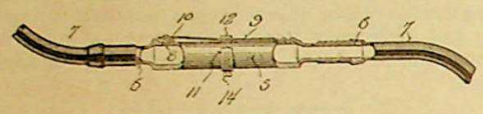
4. A carcass splitting machine comprising a power shaft a reciprocating cutting knife actuated by said power shaft and means operated by said shaft for supporting and separating the hide of the carcass as the knife cuts longitudinally through the same.

5. A carcass splitting machine, comprising a framework, a vertical guideway formed in said framework, a knife-frame slidable in said guideway, a knife adapted to reciprocate in said frame, a shaft having a crank pivotally mounted in said knife frame, a rod connecting said crank with said knife to cause the reciprocation, a vertical screw threaded shaft engaging said knife frame,

means for imparting rotation to said crank shaft and said screw threaded shaft, said means being so arranged that when the screw shaft moves said knife frame upwardly said crank shaft is not rotated.

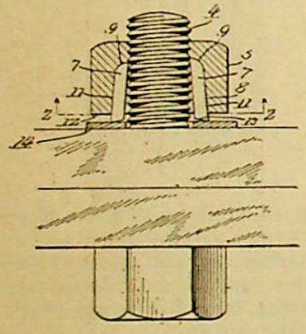
[Claim 6 not printed in the Gazette.]

1,203,754. SAFETY-VALVE FOR TIRE-PUMPS AND THE LIKE. JOHN LIEFBROER and JOHN TENDOLLEN, Oostburg, Wis. Filed May 22, 1916. Serial No. 99,167. (Cl. 137—53.)



A safety valve of the class described comprising a tubular body member provided with an opening in one end, a spring strip secured to the other end of said body member and extended adjacent said opening, a valve head secured to the leaf spring and normally urged to close the opening and a band surrounding the tube and spring and movable longitudinally thereof, said band having a portion thereof outwardly offset to receive said spring strip.

1,203,755. NUT-LOCK. AUGUST LINDELL and ELMER C. LINDELL, Rockford, Ill. Filed June 19, 1916. Serial No. 104,511. (Cl. 151—19.)



1. An improved nut lock comprising a bolt, a nut therefor having a groove in its threaded face extending from one end of the nut crosswise of the threads and terminating short of the opposite end, the inner end of the groove being inclined providing an inclined abutment leading into the bore of the nut, and a pin adapted to slidably fit in said groove, the pin being of greater length than said groove and having an end in abutment with said inclined end of the groove and tapered substantially in conformity to the same, whereby when the nut is drawn tight the pin will be forced lengthwise and the tapered point thereof will be directed laterally by the inclined abutment and jammed into the adjacent threaded face of the bolt to effectively lock the nut thereto.

2. An improved nut lock comprising a bolt, a nut therefor having an axial groove in its threaded face extending from one end partially to the other end of the nut, the inner face of the groove being slightly inclined toward the bore from the open end of the nut toward its closed end, which latter is inclined at a more pronounced angle into the bore of the nut, and a pin fitting in the groove, having substantially parallel sides and a tapered end abutting against said inclined end of the groove, the other end of said pin projecting beyond the adjacent face of the nut, whereby when the nut is drawn tight the pin will be forced lengthwise and its tapered end guided by the inclined faces of the groove so that the major length of the pin is moved away from the bolt and the said tapered end is forcibly jammed into the bolt.

3. An improved nut lock comprising a bolt, a nut therefor having a groove in its threaded face extending from one end of the nut part way the length thereof having sides shaped in cross section to converge toward the bore of the nut and having its inner end inclined into the bore, and a pin fitting in said groove, shaped to conform to the sides and inclined end thereof so that the pin is prevented from moving radially into the bore of the nut, the outer end of the pin being projected beyond the adjacent end of the nut so that when the same is drawn tight the pin will be moved lengthwise in the groove and the pointed end of the pin will be jammed into the adjacent threaded face of the bolt by the action of said inclined end of the groove.

4. An improved nut lock comprising a bolt, a nut therefor, the threaded face of which is grooved throughout a portion of its length, the inner end of the groove being curved into the bore and the inner wall extending from said curved end to the open end of the groove on a slight incline away from the bore so that the depth of the groove is greatest at its open end, and a pin fitting in said groove, having substantially parallel sides and being curved at one end in conformity to the said curved end of the groove and tapered at its opposite end so as to present diagonally opposite pointed ends, the said tapered end projecting beyond the adjacent end of the nut when the pin is in abutment with said curved end of the groove, whereby when the nut is drawn tight the pin will be forcibly pressed lengthwise in a line between the said diagonally opposite ends of the points of the pin so that the pin will be rocked outwardly on said curved end of the groove, thus preventing the major body of the pin from marring the threads of the bolt and causing the inner pointed end of the pin to be jammed into the bore to effectively lock the nut thereto.

1,203,756. PROCESS OF MAKING ACETYL-CELLULOSE PLASTIC COMPOUNDS. WILLIAM G. LINDSAY, Caldwell, N. J., assignor to The Celluloid Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 23, 1912, Serial No. 699,235. Divided and this application filed June 8, 1915. Serial No. 32,862. (Cl. 106—40.)

1. The process of making acetyl cellulose plastic compounds from that variety of acetyl cellulose which is freely soluble in acetone which consists in mixing paraethyltoluolsulfonamid with the acetyl cellulose; adding a mixture of ethyl acetate and methyl alcohol; allowing the excess of solvent to evaporate; working the mass on rolls or in presses with the application of heat, substantially as set forth.

2. The process of making acetyl cellulose plastic compounds from that variety of acetyl cellulose which is freely soluble in acetone that consists in mixing paraethyltoluolsulfonamid with triphenyl-phosphate and acetyl cellulose; adding a mixture of ethyl acetate and methyl alcohol; allowing the excess of solvent to evaporate; working the mass on rolls or in presses with the application of heat, substantially as set forth.

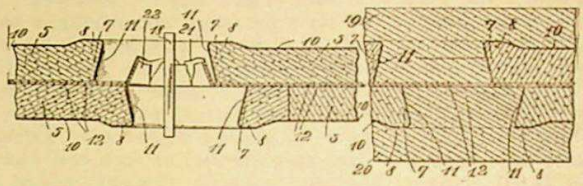
3. The process of making acetyl cellulose plastic compounds which consists in treating that variety of acetyl cellulose which is freely soluble in acetone with ethyl acetate in admixture with methyl alcohol substantially in the proportions described and with paraethyltoluolsulfonamid; and manipulating the mass.

4. The process of making acetyl cellulose plastic compounds which consists in treating that variety of acetyl cellulose which is freely soluble in acetone with ethyl acetate in admixture with methyl alcohol substantially in the proportions described and with paraethyltoluolsulfonamid and triphenylphosphate; and manipulating the mass.

1,203,757. BASE FOR CONCRETE STRUCTURES. ROBERT LINKLETTER, Jersey City, N. J., assignor, by direct and mesne assignments, of one-third to himself and two-thirds to George W. Muttart, Jersey City, N. J. Filed Oct. 7, 1915. Serial No. 54,486. (Cl. 72—124.)

1. In a device of the character described the combination of a plurality of boards disposed in groups and each provided with anchor holes, the boards of one group being staggered relatively to the boards of another group, a

number of fastening members each engaging a board of each of the two groups and extending through the anchor holes thereof, and a quantity of plastic material adhering to said boards and filled into said anchor holes thereof, so as to conceal said fastening members.

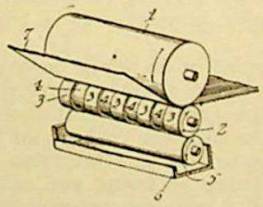


2. A building unit, comprising a flat body member provided with anchor holes and with thickened portions encircling said anchor holes and extending slightly from the face of said body member.

3. A building unit, comprising a flat body member provided with anchor holes of substantially frusto-conical form extending through it and with annular projections each encircling a hole and extending integrally a slight distance outwardly from the face of the board.

4. A base for concrete structures comprising a number of boards disposed edge to edge, each board being provided with anchor holes and with projecting portions encircling said holes and extending integrally from the faces of said boards, and a quantity of plastic material spread over said boards and partially resting upon said projecting portions, said plastic material extending integrally into said anchor holes.

1,203,758. PROCESS FOR TREATING SHADES AND THE LIKE. ARTHUR R. LOWE, Chicago, Ill., assignor to The Western Shade Cloth Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 22, 1915. Serial No. 3,788. (Cl. 91—67.9.)



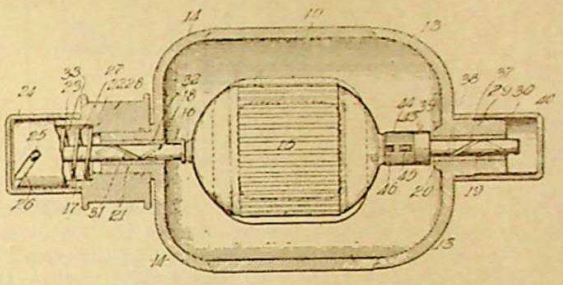
1. The herein described process of manufacturing shades and the like, consisting in applying a suitable filling material to a properly prepared fabric, and then applying pressure thereto, said pressure varying at different parts of the fabric, whereby the body of the filler in the fabric also varies at different parts thereof, and thereafter finishing the shade in the usual manner, to produce a uniform smooth surface.

2. The herein described process of manufacturing shades and the like, consisting in applying a suitable filling material to a properly prepared fabric, and then applying pressure thereto, said pressure varying at different parts of the fabric, whereby the body of the filler also varies at different parts of the fabric, and thereafter applying more filler thereto, and subjecting the same to a substantially uniform pressure, whereby the body of the filler in the fabric is also made substantially uniform.

3. The herein described process of manufacturing shades and the like, consisting of applying a suitable filling to properly prepared fabric, and applying pressure thereto, the pressure varying at different parts thereof, and thereafter applying more filler of a slightly different color to the fabric, and subjecting the same to a uniform pressure, and finishing the shade in the usual manner.

4. The herein described process of manufacturing shades and the like, consisting in applying a suitable filling material to a properly prepared fabric, and then applying pressure thereto, said pressure varying at different parts of the fabric, whereby the body of the filler also varies at different parts of the fabric, and thereafter treating the filled fabric a plurality of times by applying more filler thereto and subjecting the same to a substantially uniform pressure, whereby the body of the filler in the fabric is made substantially uniform.

1,203,759. DYNAMO-ELECTRIC MACHINE. HOWARD MCQUILLIN, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,306. (Cl. 64—24.)



1. In a dynamo electric machine, the combination of a rotatable and endwise movable shaft, an armature mounted thereon, a bearing for said shaft, and a spiral oil groove formed on the shaft, the inclination of the groove outwardly from the armature being away from the direction of rotation and its inner end terminating at a point at all times within the axial confines of the bearing.

2. In a dynamo electric machine, the combination of a rotatable and endwise movable shaft, an armature mounted thereon, a bearing for said shaft, an annular groove formed within said bearing adjacent its inner end, means for supplying oil to said groove, and a spiral groove formed on the portion of the shaft adjacent the bearing, the inclination of the groove outwardly from the armature being away from the direction of rotation and its inner end positioned at a point registering with the aforesaid annular groove in the bearing when the shaft is in its operative position.

3. In a dynamo electric machine, the combination of a rotatable, endwise movable shaft, an armature mounted thereon, means for resiliently holding the shaft at one extreme end of its movement, means operable upon the rotation of the shaft for moving the same to the opposite position, a bearing for said shaft, an annular oil groove formed in said bearing near its inner end, an oil reservoir, a duct leading from said reservoir to the annular groove, and a spiral oil groove formed on the shaft, the inclination of the groove outwardly from the armature being away from the direction of rotation, its inner end being positioned on the shaft for registering with the annular oil groove when the shaft is in its last mentioned position and the other end of the oil groove extending beyond the bearing.

4. In a dynamo electric machine, the combination of a rotatable endwise movable armature shaft, a rotatable power transmitting means rotatable thereabout, said means having diametrically opposite inclined surfaces thereon, projections on the shaft in sliding engagement with the surfaces and means within the confines of said power transmitting means for resiliently holding the projections at the outer end of the said surfaces.

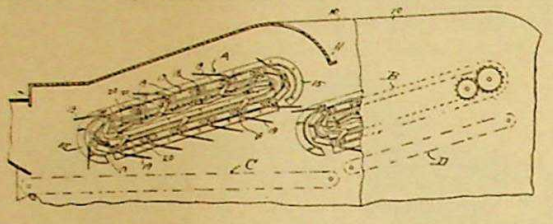
5. In a dynamo electric machine, the combination of a rotatable endwise movable armature shaft, a drive means having a tubular projection rotatable thereabout, said drive means having diametrically opposite slots formed therein, projections on the shaft in sliding engagement with the slots, said drive means having an abutment formed within, and a coil spring positioned within the tubular extension and abutting at one end against the abutment on the drive means and at its other end against said projections on the shaft.

[Claims 6 to 19 not printed in the Gazette.]

1,203,760. VIBRATORY STRAW-CARRIER. JOHN A. MALM, Diamond, S. D. Filed Mar. 22, 1916. Serial No. 86,024. (Cl. 130—22.)

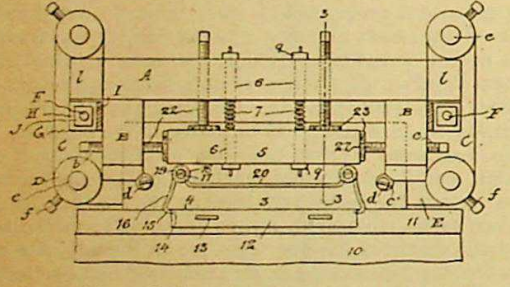
1. A straw carrier for threshing machines comprising spaced endless traveling members, a plurality of rods con-

necting the members and rotatably mounted therein, cam guides within the endless members respectively, arms fixed on said rods, rollers on said arms, the rollers on the arms of adjacent rods coöperating with respective cam guides to oscillate said rods oppositely during travel of the members, and fingers fixed on said rod.



2. A straw carrier for threshing machines comprising spaced endless traveling members, means for tightening said members, a plurality of rods connecting the members and rotatably mounted therein, cam guides within the endless members respectively, means for lengthening and shortening said guides, arms fixed on said rods, rollers on said arms, the rollers on the arms of adjacent rods cooperating with respective cam guides to oscillate said rods oppositely during travel of the members, and fingers fixed on said rods.

1,203,761. SHADING-MACHINE. WILLIAM HENRY MARGETTS, Toronto, Ontario, Canada. Filed Dec. 29, 1915. Serial No. 69,287. (Cl. 101—162.)



1. A machine of the class described comprising a suitable frame; a sliding plate mounted in said frame; means for adjusting the position of said sliding plate longitudinally and transversely in respect of said frame, elastic means associated with the said sliding plate and said frame which operates to hold said sliding plate in its transversely adjusted position, and means carried by said sliding plate whereby a frame provided with a film may be hinged thereto.

2. A machine of the class described comprising a suitable frame; a bottom plate secured to said frame; a sliding plate mounted in said frame, and upon said bottom plate; means for adjusting the position of said sliding plate longitudinally and transversely in respect of said frame, elastic means associated with the said sliding plate and said frame which operates to hold said sliding plate in its transversely adjusted position, and means carried by said sliding plate whereby a frame provided with a film may be hinged thereto.

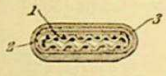
3. A machine of the class described comprising a suitable frame, a bottom plate secured to said frame; a sliding plate mounted in said frame and upon said bottom plate; means for adjusting the position of the said sliding plate longitudinally and transversely in respect of said frame; means carried by said sliding plate, elastic means associated with the said sliding plate and said frame which operates to hold said sliding plate in its transversely adjusted position, whereby a frame provided with a film may be hinged thereto, and posts adjustably mounted one at each corner of said frame whereby the height of said frame may be adjusted.

4. A machine of the class described comprising a suitable frame; a bottom plate secured to said frame; a sliding plate mounted in said frame and upon said bottom plate; means for adjusting the position of the said sliding plate in said frame; a pair of coiled springs coupling said sliding plate to the back of said frame; means carried by said sliding plate whereby a frame provided with a film may be hinged thereto, and posts adjustably mounted one at each corner of said frame whereby the height of said frame may be adjusted.

5 A machine of the class described comprising a back plate integrally provided at each end with bearing blocks; end plates, and a bottom plate extending for the full length and width of the machine; means whereby said back plate and end plates and bottom plate are secured together; a sliding plate comprising a platform designed to operate upon said bottom plate and at each end underneath said bearing blocks; a coupling element carried by said sliding plate; means for adjusting the position of said sliding plate comprising threaded stems each provided at its inner end with a disk; certain of the threaded stems designed to be held in said bearing blocks at each end of said coupling element to transversely adjust the position of said sliding plate; certain of said threaded stems designed to be held in said back plate to adjust the forward and backward movement of said back plate, and springs whereby said sliding plate is coupled to said back plate, as set forth.

[Claim 6 not printed in the Gazette.]

1,203,762. GASKET. CHARLES I. E. MASTIN, Midland Park, N. J. Filed Aug. 14, 1915. Serial No. 45,461. (Cl. 137—121.)



1. The method of making gaskets consisting in forming a metal ring, wrapping said ring with fabric coated with rubber gum, enveloping said wrapped ring in a sheet of uncured gum and then subjecting the doubly wrapped ring to pressure and heat to vulcanize or cure the gum and to form the outer wrapping into a homogeneous seamless covering.

2. A gasket formed of an inner metallic ring, a wrapping of fabric and rubber around said ring and a seamless envelop of gum around said fabric-wrapped ring and united permanently with the rubber and fabric wrapping.

3. A gasket comprising a reinforcing ring formed of wire gauze, a covering of fabric and rubber for said reinforcing ring and a seamless covering of gum or rubber for said fabric-wrapped ring.

4. A gasket comprising a thin flat reinforcing ring formed of fine flexible wire, a covering of fabric for said reinforcing ring, and a seamless covering of gum or rubber for said fabric-wrapped ring and united permanently with the fabric wrapping.

5. A gasket comprising a reinforcing ring formed of flat tubular wire gauze, a covering of fabric for said reinforcing ring, and a seamless covering of gum or rubber for said fabric-wrapped ring.

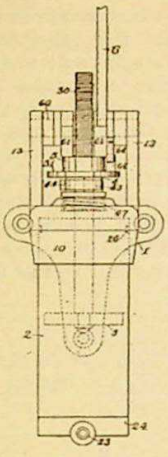
[Claim 6 not printed in the Gazette.]

1,203,763. DISPENSING DEVICE. DAVID J. MATTHEWS, Seattle, Wash. Filed Apr. 30, 1914. Serial No. 835,546. (Cl. 221—79.)

1. In a machine for dispensing a material by extrusion, a container, a carton of a shape and size to fit snugly within said container and void of heads when inserted therein, a piston fitting closely in said carton, the lower or bottom end of the cylinder being reduced in diameter to form a ledge of a width equaling the thickness of the carton wall, whereby the piston must travel beyond the end of the carton before emptying the cylinder.

2. In a machine for dispensing a material by extrusion, a frame, a piston and means for operating it carried by the frame, a cylinder provided with readily detachable means for securing it to the frame in position to receive the piston, said cylinder having an interior diameter from one end to near its other end which is greater than that

of the piston, the remainder of its length having an inner diameter conforming to that of the piston, and a headless carton fitting into said cylinder and having an inner diameter conforming to that of the piston.



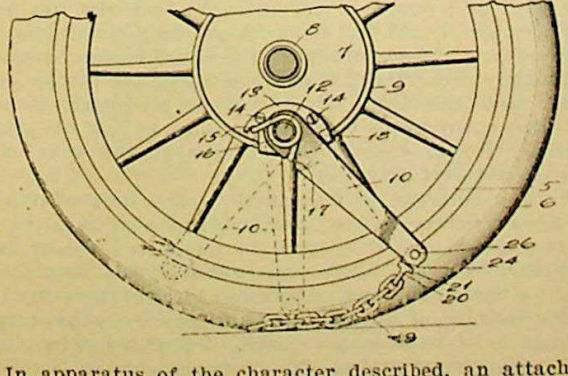
3. In a mechanism for dispensing a material by extrusion, a cylinder serving as a container for the material to be dispensed, a piston fitting within the cylinder and acting as the extruding agent, a threaded piston rod, a nut fitting said rod, means for producing relative rotative movement between nut and rod, and means for reciprocating said nut to advance the piston.

4. In a mechanism for dispensing a material by extrusion, a cylinder serving as a container for the material to be dispensed, a piston fitting within the cylinder and acting as the extruding agent, a threaded piston rod, a nut fitting said rod, said nut being mounted to have limited reciprocative movement lengthwise the rod, means for producing relative rotative movement between nut and rod, and a pivoted lever in position to engage said nut to reciprocate it and thereby advance the piston.

5. In a mechanism for dispensing a material by extrusion, a cylinder serving as a container for the material to be dispensed, a piston fitting within the cylinder and acting as the extruding agent, a threaded piston rod, a nut fitting said rod and mounted to have a limited reciprocative movement in the direction of the length of the rod, means for producing relative rotative movement between nut and rod, a spring acting upon the nut to retract the piston and means for applying power to said nut to advance the piston.

[Claims 6 to 13 not printed in the Gazette.]

1,203,764. AUTOMOBILE-WHEEL TRACTION DEVICE. GEORGE S. MAXWELL, Washington, D. C., assignor of one-half to Maynard A. Bayles, Washington, D. C., and William F. Hale, Nokesville, Va. Filed Dec. 14, 1915. Serial No. 66,763. (Cl. 21—8.)



In apparatus of the character described, an attaching member arranged near and upon one side of a wheel of an automobile and connected with a relatively stationary part of the automobile and having a forward stop element, a stud carried by the attaching member, an arm having its inner end apertured to pivotally receive the stud and its lower end arranged in advance of the point of contact of the tire of the wheel with the road bed when the arm contacts with the stop element, a coil spring carried by the stud and having one end engaging the attaching element and the other end engaging the arm to move it forwardly into contact with the stop element, a flexible traction element normally arranged in a plane parallel to the plane of rotation of the wheel, and a universal joint connecting the forward end of the flexible traction element with the outer end of the arm.

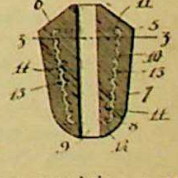
1,203,765. CURTAIN-ROD BRACKET. CHARLES B. MILLER, Meriden, Conn., assignor to Berbecker & Rowland Manufacturing Company, Waterville, Conn., a Corporation of Connecticut. Filed Feb. 24, 1915. Serial No. 10,211. (Cl. 156—22.)

1. A center support for a curtain rod comprising a supporting arm, an attaching plate carried thereby, a spring clasp slidably mounted upon said arm, said spring clasp comprising spaced sides with registering slots therein receiving the arm therethrough.

2. A center support for curtain rods comprising a supporting arm, an attaching plate carried thereby, a spring clasp comprising spaced resilient arms, said arms provided with registering slots therein, receiving the supporting arm therethrough, said spring arms adapted to be spread by the reception of a curtain rod therebetween and to bind against the upper and lower edges of said supporting arm.

3. A center support for a curtain rod comprising a bracket including a supporting arm, a spring clasp formed with spaced resilient arms connected at their lower extremities by a spring loop, the intermediate portions of said resilient arms provided with registering openings therein, said openings receiving the supporting arm of the bracket therethrough.

1,203,766. VALVE. GEORGE O. MILLER, North Tonawanda, N. Y. Filed Sept. 6, 1913. Serial No. 788,483. (Cl. 137—4.)



1. A valve for bibs comprising a yielding body having a central cylindrical bore extending from end to end thereof and a metallic reinforcing member somewhat shorter than said bore embedded in said yielding body and encircling said central bore.

2. A valve for bibs comprising a yielding body tapered lengthwise and having a longitudinal cylindrical bore therein extending from end to end thereof, and a reinforcing member shorter than said bore embedded therein and similarly tapered.

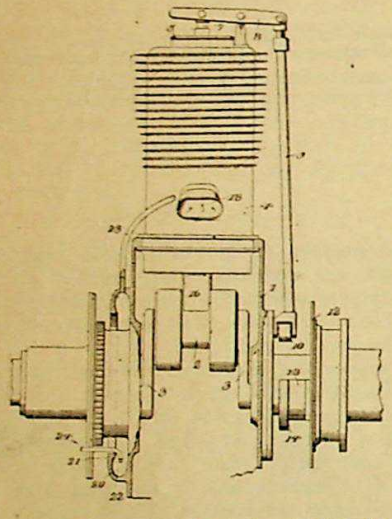
3. A valve for bibs comprising a yielding elongated body having a central cylindrical bore extending from one end thereof to the other, a metallic reinforcement embedded therein and extending from a point near one end of said body to a point near the other end thereof, said reinforcing member having its ends bent at an angle to prevent cutting of the material forming the body when pressure is applied thereto.

4. A valve for bibs comprising a tapered body formed of yielding material having a central cylindrical bore arranged lengthwise therein and extending from end to end thereof, a circular metallic reinforcing member somewhat shorter than said bore embedded in said yielding body and having its wall arranged at a slight angle to said bore.

5. A valve for Fuller bibs comprising an elongated body-portion formed of yielding material having a central cylindrical bore extending from end to end thereof, a circular metallic reinforcing member somewhat shorter than said bore embedded in said body portion and having its opposite ends bent inwardly.

[Claims 6 to 9 not printed in the Gazette.]

1,203,767. GAS-ENGINE. ROBERT S. MOORE, Washington, D. C., assignor to Gyro Motor Company, Washington, D. C., a Corporation of Delaware. Filed Apr. 1, 1912. Serial No. 687,817. (Cl. 123—44.)



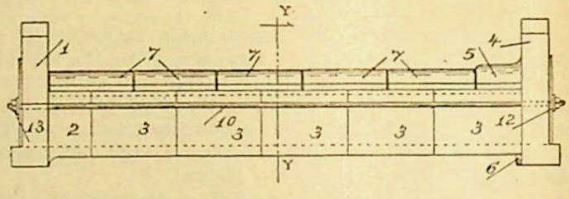
1. A gas engine including in combination a rotating casing, a cylinder carried thereby, a piston in said cylinder, an air intake in said cylinder adjacent the inner extreme position of the piston and on the advance side of the cylinder in the direction of rotation, a collecting funnel connected with said air intake and projecting in the direction of rotation of the cylinder, and a fuel intake for the cylinder through which fuel may be supplied directly to the cylinder, said fuel intake being free from valves and positioned so as to be uncovered by the piston subsequently to the uncovering of the air intake.

2. A gas engine including in combination a rotating casing, a cylinder carried thereby, an annular pocket carried by and rotating with the casing, said pocket having its outer surface closed and having a port leading from the extreem outer portion thereof, said cylinder having a fuel intake port adapted to be uncovered by the piston, and a pipe connecting said port to the intake port in the cylinder, whereby a combustible fluid may be carried by centrifugal force from the pocket through the pipe to the cylinder, an air intake for the cylinder on the advance side thereof in the direction of rotation, and a funnel for collecting and forcing air through said intake into said cylinder, said air intake being disposed so as to be uncovered in advance of the fluid intake.

3. A gas engine including in combination, a rotating casing, a cylinder carried thereby, an exhaust valve in the outer end of the cylinder, an air intake adjacent the inner position of the piston and on the advance side of the cylinder in the direction of rotation, said air intake having a collecting funnel whereby air is forced by the rotation of the cylinder into the cylinder, a fuel intake located adjacent the air intake so as to be uncovered by the piston subsequently to the air intake, and means controlled by centrifugal force for supplying fuel to said fuel intake, said fuel intake being free from valves whereby a free and unobstructed passage is provided for the fuel during the intake period.

4. A gas engine including in combination a rotating casing, a cylinder carried thereby, an exhaust valve in the outer end of the cylinder, an air intake adjacent the inner position of the piston and on the advance side of the cylinder in the direction of rotation, said air intake having a collecting funnel whereby air is forced by the rotation of the cylinder into the cylinder, a fuel intake located adjacent the air intake so as to be uncovered by the piston subsequently to the air intake, a flange carried by the casing and constructed to form a pocket having its outer face closed, a pipe leading from the outer face of the pocket to the fuel intake for the cylinder, and means for supplying said pocket with fuel whereby said fuel is carried by centrifugal force against the bottom of the pocket and through the pipe to said cylinder, said fuel intake being free from valves whereby a free and unobstructed passage is provided for the fuel during the intake perior.

1,203,768. CULVERT. SAMUEL E. MOORE, Williamsville, Ill. Filed Aug. 9, 1915. Serial No. 44,529. (Cl. 72—52.)



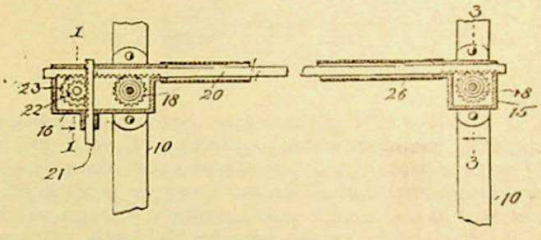
1. In a culvert, the combination of a first abutment having a trough-shaped bottom member integral with and at right angles to the abutment and adapted to serve as a spacer and also adapted to prevent lateral movement or turning of the abutment; a second abutment having a cover member integral with and at right angles to said second abutment and adapted to serve as a spacer and also adapted to prevent lateral movement or turning of said second abutment; bottom sections in line with the bottom member of the first abutment, one end of one terminal section being in close contact with the free end of said first abutment and one end of the other terminal section being in close contact with the inner face of said second abutment; connecting devices rigidly connecting said abutments and said bottom sections; and removable cover sections practically filling the space between the inner face of said first abutment and the inner end of the cover-member of said second abutment.

2. In a culvert, the combination of a first abutment having an inwardly extending bottom member integral with and at right angles to said first abutment and adapted to serve as a spacer and adapted to prevent lateral movement of the abutment; a complemental abutment having an inwardly extending cover-member integral with and at right angles to said complemental abutment and adapted to serve as a spacer and adapted to prevent lateral movement of said complemental abutment; bottom sections in line with said complemental abutment and with the bottom member of said first named abutment; connecting devices outside of and parallel to the alined bottom sections and rigidly connecting the abutments and the bottom sections; and end-to-end cover sections occupying practically the entire space between the inner end of the cover member of said complemental abutment and the inner face of said first abutment.

3. In a culvert, the combination of a first abutment having an integral inwardly extended member at an angle to the abutment and adapted to serve as a spacer and adapted to prevent lateral movement of said first abutment; a second abutment having an integral inwardly extended member at an angle to said second abutment and adapted to serve as a spacer and adapted to prevent lateral movement of said second abutment; bottom sections intermediate of the abutments; and cover sections intermediate of the abutments and breaking joints with the bottom sections.

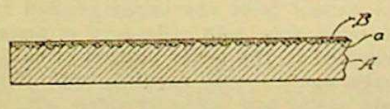
4. In a culvert, the combination of a first abutment having two holes parallel to each other and adapted to accommodate bolts, also having an integral inwardly extended member at an angle to the abutment and adapted to serve as a spacer and adapted to prevent lateral movement or turning of the abutment; a second abutment having two holes parallel to each other and adapted to accommodate bolts, also having an integral inwardly extended member at an angle to said second abutment and adapted to serve as a spacer and adapted to prevent lateral movement or turning of said second abutment; alined bottom sections intermediate of the abutments; alined separately removable, cover sections intermediate of the abutments and breaking joints with the bottom sections; and two bolts parallel to each other and extending through the holes in the abutments and adjacent to and outside of the sides of the alined bottom sections.

1,203,769. HEADLIGHT-TURNING MECHANISM FOR VEHICLES. JAMES W. MOTT, Cresco, Iowa. Filed Sept. 10, 1915. Serial No. 49,854. (Cl. 240—62.)



In a motor vehicle, a chassis; a pair of casings supported by the side frame members of the chassis; vertical spindles extending upwardly from said casings; headlights mounted thereon; gears secured to said spindles and located within the casings, said casings having alined openings constituting bearings; a rack extending transversely across the front of the vehicle and mounted in said bearing openings, said rack engaging the gears on said spindles, one of said casings having alined bearing openings at right angles to the first-named openings; a second rack adapted to be moved endwise through said second set of bearing openings; and gearing for transmitting movement from the last mentioned rack to the first mentioned rack.

1,203,770. LITHOGRAPHIC PLATE. SAMUEL A. NEIDICH, Edgewater Park, N. J., assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 22, 1914. Serial No. 858,012. (Cl. 101—173.)



1. As a new article of manufacture, a metallic plate adapted for lithographic purposes and capable when moist of resisting ink over its entire face sufficient for lithographic printing without subsequent chemical treatment and capable of having an ink-carrying image affixed firmly to it.

2. As a new article of manufacture, a metallic lithographic plate etched over its entire face sufficiently to be workable when moist as an ink-repellent surface without further chemical treatment and adapted to receive a design thereon.

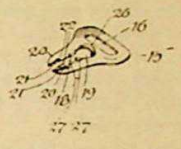
3. As a new article of manufacture, a metallic lithographic plate grained and etched over its entire face, to be ink-resisting sufficiently for lithographic printing when moist without further chemical treatment.

4. As a new article of manufacture, a metallic lithographic plate etched to be ink-resisting sufficient for lithographic printing when moist, and gummed over its entire face.

5. As a new article of manufacture, a metallic lithographic plate grained, etched to be ink-resisting sufficiently for lithographic printing when moist and gummed over its entire face.

[Claims 6 to 10 not printed in the Gazette.]

1,203,771. CLASP. EMORY D. NICHOLS, Chicago, Ill. Filed Feb. 1, 1912. Serial No. 674,836. (Cl. 24—224.)



1. A clasp comprising a member having a headed stud secured thereto, a member formed with an enlarged opening through which the head is adapted to pass, and with an open-ended slot leading from said opening to the outer end of said latter member, through which the shank of the stud may pass to permit the members to be separated by the movement of the shank through the outer end of the slot and away from the enlarged opening, the open end of said slot being normally as wide as the shank, and means rigid with the slotted member for engaging the head of the stud to hold the members against disconnection, said members, when connected, being movable toward each other to release the head from said means and permit the shank to pass through the outer end of the slot.

2. A clasp comprising a member having a headed stud secured thereto, a member formed with an enlarged opening through which the head is adapted to pass, and with an open-ended slot leading from said opening to the outer end of said latter member, through which the shank of the stud may pass to permit the members to be separated by the movement of the shank through the outer end of the slot and away from the enlarged opening, the open end of said slot being normally as wide as the shank, and outwardly projecting lugs at the sides of the slot for engaging the head of the stud to hold the members against disconnection, said members, when connected, being movable toward each other to release the head from said means, and permit the shank to pass through the outer end of the stud.

3. A clasp comprising a member having a headed stud secured thereto, a member formed with an enlarged opening through which the head is adapted to pass, and with an open-ended slot leading from said opening to the outer end of said latter member, through which the shank of the stud may pass to permit the members to be separated by the movement of the shank through the outer end of the slot and away from the enlarged opening, the open end of said slot being normally as wide as the shank, means rigid with the slotted member for engaging the head of the stud to hold the members against disconnection, said members, when connected, being movable toward each other to release the head from said means and permit the shank to pass through the outer end of the slot, and yielding means interposed between the members for pressing them apart.

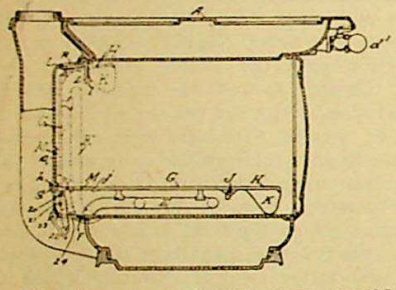
4. A clasp comprising a member having a headed stud secured thereto, a member formed with an enlarged opening through which the head is adapted to pass, and with an open-ended slot leading from said opening to the outer end of said latter member, through which the shank of the stud may pass to permit the members to be separated by the movement of the shank through the outer end of the slot and away from the enlarged opening, the open end of said slot being normally as wide as the shank, means rigid with the slotted member for engaging the head of the stud to hold them against relative longitudinal movement in either direction, said members, when connected, being movable toward each other to release the head from said means and permit the shank to pass through the outer end of the slot.

5. A clasp comprising a member having a headed stud secured thereto, a member formed with an enlarged open-

ing through which the head is adapted to pass, and with an open-ended slot leading from said opening to the outer end of said latter member, through which the shank of the stud may pass to permit the members to be separated by the movement of the shank through the outer end of the slot and away from the enlarged opening, the open end of said slot being normally as wide as the shank, means rigid with the slotted member and at the sides of the slot for engaging the head of the stud to hold the members against relative longitudinal movement in either direction, said members, when connected, being movable toward each other, to release the head from said means and permit the shank to pass through the outer end of the slot, and means between said members for normally pressing them apart to cause the head to be held by said means on the slotted member.

[Claim 6 not printed in the Gazette.]

1,203,772. STOVE. HANS P. G. NORSTRAND, Albany, N. Y., assignor to Rathbone, Sard & Company, Albany, N. Y., a Corporation. Filed Mar. 12, 1915. Serial No. 13,899. (Cl. 126—36.)



1. In a combination gas and coal stove provided with an oven, a gas oven bottom; a gas burner upon which the gas oven bottom is mounted and with which it may be moved; and means outside of the stove for placing said burner and the gas oven bottom out of the way at the back of the oven.

2. In a combination gas and coal stove provided with an oven, a gas oven bottom composed of two pieces hinged together and a plate hinged in the back of the oven adapted to assume a horizontal position forming a prolongation of the rest of the gas oven bottom; a gas burner; and means exterior of the stove for raising said burner and each portion of the gas oven bottom simultaneously, removing them out of the way when the stove is to be heated with coal instead of gas.

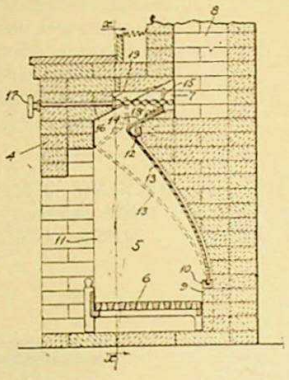
3. In a combination gas and coal stove provided with an oven, a gas oven bottom; a burner attached thereto; dampers for opening and closing air vents leading from the oven; and means exterior of the oven for raising the gas oven bottom and burner and closing said dampers simultaneously.

4. In a combination gas and coal stove provided with an oven, a gas oven plate extending partly across the oven from front to rear; an additional portion hinged to said plate forming a gas oven bottom; an oven plate hinged to the rear of the stove adapted to rest in a horizontal position forming a continuation of the said first mentioned gas oven plate; a gas burner to which said gas oven bottom is attached, and by which it is supported; a gas pipe connected with said burner; an arm connected with said gas pipe; a link connected with said arm; a lever outside of the stove connected with said link; a bracket in which said lever is fulcrumed, so arranged that by the movement of the bracket the gas burner and oven plate may be raised to a vertical position, and the hinged portion brought in contact with the back of the oven and bent at an angle to the oven bottom proper when in its vertical position, said oven plate folded back against the rear of the oven by the movement of the said oven plate to its vertical position.

5. In a combination gas and coal stove provided with an oven, a gas oven bottom; a burner attached thereto; means exterior of the stove for raising the gas oven bottom; means for opening and closing air vents in the oven simultaneously with the raising and lowering of the gas oven bottom; with means for preventing the turning on of the gas when the oven bottom is raised, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,203,773. FIREPLACE. WILLIAM S. O'BRIEN, Kirkland, Wash. Filed Jan. 24, 1916. Serial No. 74,028. (Cl. 126—130.)



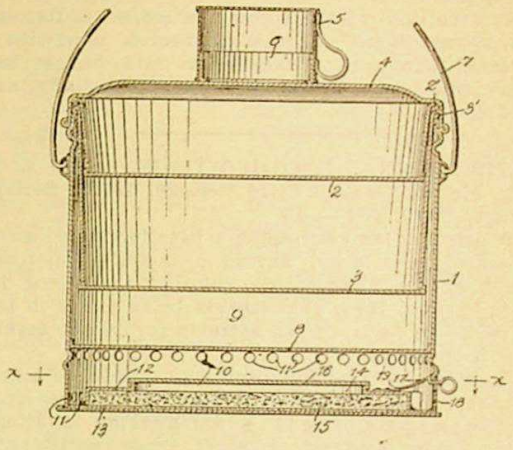
1. A fireplace of the class described which embodies a combustion chamber whose opposite end walls are each lined with a metal plate; a chimney; a passageway for smoke disposed to extend from the upper portion of said combustion chamber into said chimney; a metal bar horizontally disposed to extend between the lower portions of said metal plates to which its opposite ends are respectively fastened, said metal bar being provided with a groove disposed in its top side to extend throughout the length thereof; a stay-bar of metal horizontally disposed to extend between the upper portions of said metal plates to which its opposite ends are respectively fastened; a radiator plate of metal, disposed with its bottom edge freely resting in said groove of said bar and adapted to extend upwardly therefrom in front of and adjacent to the rear wall of said combustion chamber and into said passageway; a rod provided with a screw-threaded portion and rotatably disposed to extend through the front wall of said passageway with its screw-threaded portion in said passageway; and means associated with said screw-threaded portion of said rod and with the upper portion of said radiator plate whereby said radiator plate may be tipped forwardly and backwardly in response to a rotative movement of said rod to control and regulate the draft through said passageway.

2. A fireplace of the class described, which embodies a combustion chamber; a chimney; a passageway for smoke disposed to extend from the upper portion of said combustion chamber into said chimney; a metal bar horizontally disposed in the lower portion of said combustion chamber adjacent to and parallel with the rear wall thereof, said metal bar being provided with a groove in its top side; a radiator plate of metal disposed with its bottom edge freely resting in said groove of said bar and adapted to extend upwardly therefrom in front of the rear wall of said combustion chamber and into said passageway; a rod provided with a screw-threaded portion and rotatably disposed to extend through the front wall of said passageway; and means associated with said screw-threaded portion of said rod and with the upper portion of said radiator plate whereby said radiator plate may be tipped forwardly and backwardly in response to a rotative movement of said rod thereby to control and regulate the draft through said passageway.

1,203,774. DINNER-PAIL. JAMES L. OGDEN, Jr., Nauvoo, Ill. Filed Mar. 6, 1915. Serial No. 12,551. (Cl. 126—266.)

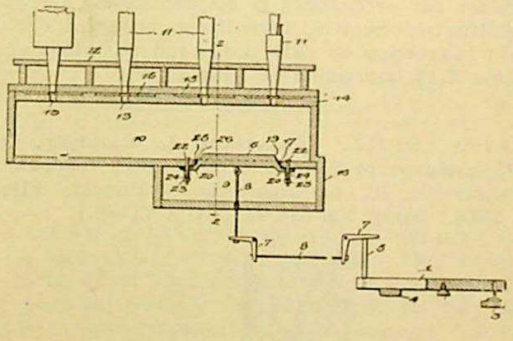
A dinner pail comprising a vessel open at its upper side; a horizontal imperforate partition in said vessel

dividing the interior thereof into a superjacent food compartment and a subjacent heating chamber; there being ventilation openings in the lateral walls of said vessel communicating with said chamber; a heating element removably mounted in said chamber, there being an opening in the lateral wall of said vessel communicating with said



chamber through which said heating element may be inserted and removed; and a resilient detent on said heating element adapted for releasable engagement with the lateral wall of said vessel at said opening, for releasably locking said heating element in position in said chamber, said detent projecting exteriorly to constitute a handle, substantially as described.

1,203,775. PALLET FOR AIR-OPERATED MUSICAL INSTRUMENTS. ARTHUR A. PAGE, Albany, N. Y. Filed Oct. 30, 1915. Serial No. 58,813. (Cl. 84—156.)

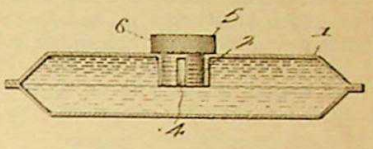


1. In a wind muscical instrument, a wind chest, a chamber connected therewith, a vertically movable pallet controlling communication between the chest and chamber and having converging opposite faces, a seat for the pallet having faces conforming to the faces of the pallet, one set of said faces being downwardly directed, and a pad on the downwardly directed faces aforesaid.

2. In a wind musical instrument, a wind chest, a chamber connected therewith, a vertically movable pallet controlling communication between the chest and chamber and having converging opposite faces, a seat for the pallet having faces conforming to the faces of the pallet, one set of said faces being downwardly directed, a pad on the downwardly directed faces aforesaid, the upwardly directed faces being smooth and polished.

3. In a musical instrument, a wind chest, a chamber communicatively connected with the chest, a valve for closing the communication between the chamber and wind chest, said valve having converging faces, a seat for the valve having faces conforming to the faces of the valve, certain of said faces being downwardly directed, and a pad on the downwardly directed faces aforesaid.

1,203,776. CHEMICAL HEATER AND COMPOSITION OF MATTER THEREFOR. THOMAS M. PASCHAL, San Antonio, Tex. Filed Nov. 22, 1913, Serial No. 802,361. Renewed Apr. 4, 1916. Serial No. 88,957. (Cl. 126—263.)



1. A compound for releasing heat by crystallization from a supersaturated solution, and for storing heat by re-solution, consisting of a main ingredient for the purpose, and a second ingredient which augments the formation of crystals at low temperatures, and also augments under heat their re-solution.

2. A compound for releasing heat by crystallization from a supersaturated solution and for storing heat by re-solution consisting of sodium hyposulfite, and a second ingredient which augments the formation of crystals at low temperatures and also augments their re-solution at high temperatures.

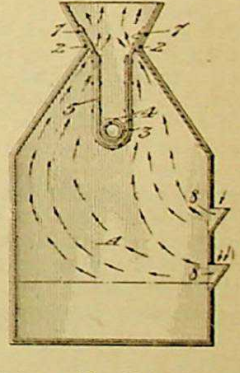
3. A compound for releasing heat by crystallization from a supersaturated solution and for storing heat by re-solution, consisting of an alkali hyposulfite as a main ingredient, and as a second ingredient for augmenting the formation of crystals, and also for augmenting their re-solution, sodium chlorid.

4. A chemical heat storing compound consisting of sodium hyposulfite and rock salt.

5. A chemical heat storing compound, consisting of sodium hyposulfite ninety-eight per cent. or more and two per cent. or less of rock salt.

[Claims 6 to 11 not printed in the Gazette.]

1,203,777. MUFFLER. CARL M. PETERSON, Chester, Mont. Filed June 25, 1914. Serial No. 847,264. (Cl. 121—116.)

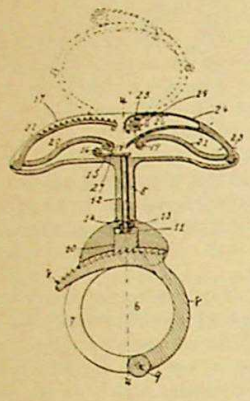


A muffler comprising a liquid-tank having air inlets adjacent to the liquid, a U-shaped trough suspended in the upper end thereof, and an exhaust-pipe extending throughout the U-shaped trough with an air-space therearound, and having an outlet in its upper side, whereby the exhaust causes an inflow of cold air over the liquid in the tank, which becomes moistened and passes around the trough for keeping the trough cool and absorbing the gases issuing therefrom.

1,203,778. POLICEMAN'S NIPPERS AND HANDCUFFS COMBINED. GEORGE W. PRATT, Oakland, Cal. Filed Nov. 16, 1915. Serial No. 61,849. (Cl. 70—24.)

1. In police nippers, in combination a tubular stock, a transverse hollow handle, connected therewith, an articulated handcuff, connected to said hollow handle and adapted to be folded therein; a flap, pivoted in said hollow handle, a cam, on one of the connected ends of said articulated hand-cuff, and adapted to actuate said flap; a rod, connected to a retaining pawl, slidably arranged

in the tube of said tubular stock; a pin, connected to said rod, said pin projecting through a slot in the wall of said tubular stock, a spiral spring, surrounding the lower end of said rod, teeth on the under face of said retaining pawl, a bifurcated semi-circular part, connected to the lower end of said tubular stock, a sickle-shaped tongue, the lower end of which is pivoted to, and in the opening, of said bifurcated part, teeth, on the upper side of said tongue, said teeth engaging with the teeth of said retaining pawl, said tongue adapted to swing in a complete circle through said bifurcated part, substantially as described.



2. In police nippers, in combination, a tubular stock, a transverse hollow handle, connected to the upper end of said tubular stock, an articulated hand-cuff, connected to said hollow handle, and adapted to be folded therein; a bifurcated semi-circular part, connected to the lower end of said tubular stock; a sickle-shaped tongue, pivoted to said bifurcated part and adapted to swing through the opening of said bifurcated part, in a complete circle; a retaining pawl, terminating in a rod, slidably arranged in said tubular stock, said retaining pawl having teeth on its under face; teeth, on the upper side of said tongue, said teeth engaging with the teeth of said retaining pawl; a spiral spring, surrounding the lower end of said rod, said spring arranged in a cavity of said tubular stock, and adapted to cause the teeth of said retaining pawl, and teeth of said tongue, to engage and disengage; a cam, on one of the connected ends of said articulated hand-cuff; a flap, pivoted in said hollow handle, said cam adapted to rest firmly against the back of said flap when said articulated handcuff is in use, causing said flap to press firmly against the top of said rod, causing the teeth of said retaining pawl and teeth of said sickle shaped tongue, to be locked in a permanent position; a pin, connected to said rod, said pin projecting through a slot in the wall of said tubular stock, said pin adapted to be raised by the finger causing disengagement of the teeth of said retaining pawl, and teeth of said tongue, substantially as described.

3. In police nippers, in combination, a tubular stock; a transverse hollow handle, connected therewith; an articulated handcuff, connected to said hollow handle and adapted to be folded therein; a housing, on one of the free ends of said articulated handcuff; a pinion, and a spring pawl, pivotably mounted in said housing, teeth, on the back of other free end of said articulated handcuff, said teeth adapted to engage with teeth of said pinion, said spring-pawl adapted to allow said pinion to rotate in one direction only, thereby acting as a lock and adapted to disengage only when said spring-pawl is raised clear of said pinion by a suitable key; a cam, on one of the connected ends of said articulated hand-cuff; a flap, pivotably mounted in said hollow handle; a retaining pawl, slidably arranged in the tube of said tubular stock; teeth, on the under face of said retaining pawl; a bifurcated semi-circular part, connected to the lower end of said tubular stock; a sickle-shaped tongue, pivoted at the lower end of said bifurcated part, and adapted to swing in a complete circle through said bifurcated part; a spiral spring, surrounding the lower end of said rod and arranged in a cavity of said tubular stock; teeth, on the upper side of said sickle-shaped tongue, said teeth adapted to engage with the teeth of said retaining pawl; a pin, connected to said rod and projecting through a slot in the wall of said tubular stock, said pin adapted so, when raised to cause the teeth of said retaining pawl and teeth of said sickle shaped tongue to disengage substantially as described.

4. In a police nippers, in combination, a tubular stock; a transverse hollow handle, connected therewith; an articulated hand-cuff, connected to said hollow handle and adapted to be folded therein, substantially as described.

1,203,779. PRINTING COMPOSITION. FRED A. PUTNAM, Melrose, Mass. Filed Dec. 20, 1912. Serial No. 737,862. (Cl. 134—36.)

1. A printing ink comprising a base formed of gum cut or digested in oil and having a metallic coloring ingredient and a non-metallic coloring ingredient incorporated therein, these constituents being mixed in proper proportions to form an ink suitable for use in making a printed impression.

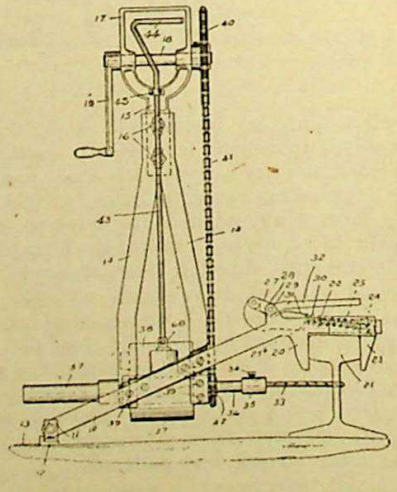
2. A printing ink comprising a base formed of a gummy substance cut or digested in oil and having incorporated therewith a metallic and a non-metallic coloring ingredient having contrasting colors, these constituents being mixed in proper proportions to produce an ink suitable for use in making a printed impression.

3. A printing ink comprising a base formed of a gummy substance cut or digested in oil and having incorporated therewith a metallic and an anilin coloring ingredient having contrasting colors, these constituents being mixed in proper proportions to form an ink suitable for use in making a printed impression.

4. A printing ink comprising a base formed of gum cut or digested in oil and having incorporated therewith two non-blendable coloring ingredients, these constituents being mixed in proper proportions to form an ink suitable for making a printed impression.

5. A printing ink comprising a base formed of a gummy substance cut or digested in oil and having incorporated therewith two coloring ingredients, one of which makes a light impression on dark goods and the other of which makes a dark impression on light goods.

1,203,780. DRILL. FREDERICK L. RAINBOW, Dundee, Ill., assignor to Illinois Iron & Bolt Company, Carpentersville, Ill., a Corporation of Illinois. Filed Feb. 2, 1914. Serial No. 816,058. (Cl. 77—9.)



1. In a machine of the character described, a clamp for engaging the machine to a rail comprising a pair of relatively movable jaws, and mechanism for opening and closing said jaws comprising a shouldered jaw which, at the opening movement of the jaws, operates to push the machine back from the rail.

2. In a machine of the character described, the combination with a base member adapted to rest upon the ground, of a framework having a loose rocking connection with the base member on which the drill spindle is supported, and a clamp on said framework adapted to engage the rail operated upon.

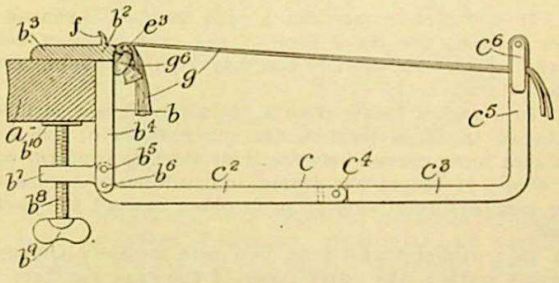
3. In a machine of the character described, the combination with a base member adapted to rest upon the ground, of a framework having a loose rocking connection with the base member on which the drill spindle is supported, a clamp on said framework adapted to engage the rail operated upon, said clamp comprising a pair of relatively movable jaws, and means for adjustably positioning the same so as to vary the span thereof for rails of different widths.

4. In a machine of the character described, the combination with a supporting frame having a rail engaging jaw thereon, of a jaw movably sustained on said frame, and mechanism for moving said movable jaw to and from the other jaw comprising an element which, with the opening of the movable jaw, forces said framework backwardly from the rail, said mechanism being adjustably connected with the movable jaw so as to vary the span of said jaws by movement of a single element.

5. In a machine of the character described, the combination with a supporting frame having a rail engaging jaw thereon, of a jaw movably sustained on said frame, a rocking member on the frame, a rod connected with the rocking member, and means for adjustably connecting the rod with said movable jaw.

[Claims 6 to 10 not printed in the Gazette.]

1,203,781. NOVELTY DEVICE. HARRY RATYCIA, New York, N. Y. Filed July 24, 1915, Serial No. 41,801. Renewed Sept. 19, 1916. Serial No. 121,068. (Cl. 66—6.)



1. A braid-work holder, comprising a head plate adapted to be secured to a support, said head plate being provided in its front edge portion with a longitudinal slot which opens outwardly at one end and backwardly of said slot, with upwardly extending hook members.

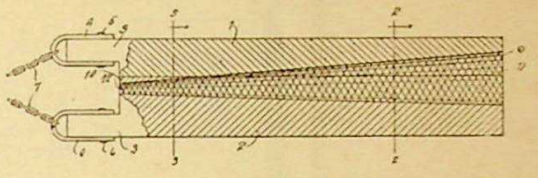
2. A braid-work holder, comprising a head portion adapted to be secured to a support and having a forwardly directed arm provided with an attaching member, said head portion being provided with a longitudinal slot which opens at one end and backwardly thereof with means for adjustably connecting a braid-work piece therewith.

3. A braid-work holder comprising a head piece provided with means for securing it to a support, said head piece being provided at the front thereof with a transverse finger and rearwardly of said finger with upwardly directed attaching members.

4. A braid-work holder comprising a head portion adapted to be secured to a support and provided at its front with a transverse finger and rearwardly of said finger with upwardly directed attaching members, said head portion being also provided with a forwardly directed arm provided at its end with an upwardly directed member having an attaching device at the top thereof.

5. A braid-work holder comprising a head portion adapted to be secured to a support and provided at its front with a transverse finger and rearwardly of said finger with upwardly directed attaching members, said head portion being also provided with a forwardly directed arm provided at its end with an upwardly directed member having an attaching device at the top thereof, and said arm being composed of separate hinged parts.

1,203,782. CABLE-CLAMP. FREDERIC M. RAYMOND, Cleveland, Ohio. Filed July 25, 1914. Serial No. 853,132. (Cl. 24—136.)

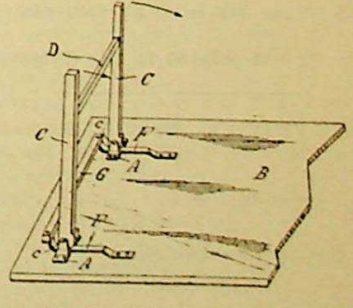


1. A cable clamp comprising coacting clamping plates, one of said plates having a longitudinally extending tapered dove-tail groove formed in one face thereof, a longitudinally extending tapered and dove-tail rib formed on the corresponding face of the other of the clamping plates and arranged to engage in said groove, said rib having a tapered groove in its outer face and said dovetail groove having a tapered groove in its flat face alining with the groove in said rib, said last named groove to receive a cable to be clamped.

2. A cable clamp including elongated clamping plates, one of said plates having a longitudinally extending, integral, dove-tailed and tapered rib extending outwardly from one face thereof, said rib having a cable receiving groove formed in its outer face and an opening through one end thereof communicating with said groove, the other of the plates having a longitudinally extending, tapered and dove-tail rib receiving groove in one face thereof to receive said rib, said last named groove having a cable receiving groove in its flat face for coöperation with the groove and opening in the rib for holding the cable.

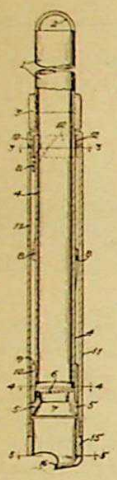
3. A cable clamp comprising two coacting clamping members, one of the members having a longitudinally disposed transversely tapered dove-tailed groove, and the other member having a transversely tapered longitudinally disposed dove-tailed rib slidably interlocked with the dove-tailed groove, said groove and rib being also provided with longitudinally disposed tapered cable receiving grooves having gripping faces for engaging the cable.

1,203,783. FOLDING TABLE. HENRY R. REISCHMANN, New York, N. Y. Filed Oct. 6, 1915. Serial No. 54,371. (Cl. 45—74.)



In a folding table, brackets having two side pieces each, at right angles with the table top, mounted in the corners thereof, a leg pivotally mounted in each of said brackets, a flat spring mounted in front of each of said brackets, projecting between the side pieces thereof, between the table top and the upper end of the leg, a hole in said spring, two lugs carried by each of said legs adapted to be engaged by said hole in the spring in the extended and folded positions of the leg, respectively, and means connecting said springs in pairs for simultaneous operation of each pair, substantially as and for the purpose set forth.

1,203,784. SAND-PUMP FOR WELLS. LEROY L. RICHARD, Coalinga, Cal., assignor of one-half to Samuel Allen Guiberson, Jr., San Francisco, Cal. Filed Mar. 15, 1916. Serial No. 84,294. (Cl. 166—19.)



1. A sand pump comprising a barrel; a check valve in the lower end of said barrel for admitting sand thereinto; a movable sleeve surrounding said barrel; means carried by said sleeve for loosening the sand prior to its admission into the barrel; and means positioned between said barrel and said sleeve for rotating said sleeve when said barrel is moved lineally therewithin.

2. A sand pump comprising a barrel; a check valve in the lower end of said barrel for admitting sand thereinto; a sleeve surrounding said barrel; means carried by said sleeve for loosening the sand prior to its admission into said barrel; and means dependent upon a relative lineal movement of the barrel and sleeve for rotating said sleeve about said barrel.

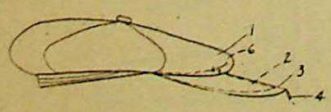
3. A sand pump comprising a barrel; a check valve in the lower end thereof for admitting sand thereinto; a rotatable sleeve surrounding said barrel; means carried by said sleeve for loosening the sand prior to its admission into the barrel; and means for rotating said sleeve about said barrel.

4. A sand pump comprising a barrel; a check valve in the lower end thereof for admitting sand thereinto; a rotatable sleeve surrounding said barrel; an auger carried by the lower end of said sleeve; and means for rotating said sleeve about said barrel.

5. A sand pump comprising a barrel having an admission check valve in its bottom; a sleeve surrounding said barrel; an auger carried by the lower end of said sleeve; and means dependent upon a relative lineal movement of the barrel and sleeve for rotating said sleeve about said barrel.

[Claims 6 to 11 not printed in the Gazette.]

1,203,785. EYE-SHIELD. BURT R. RICKARDS, Melrose, Mass. Filed Nov. 17, 1915. Serial No. 61,891. (Cl. 2—149.)



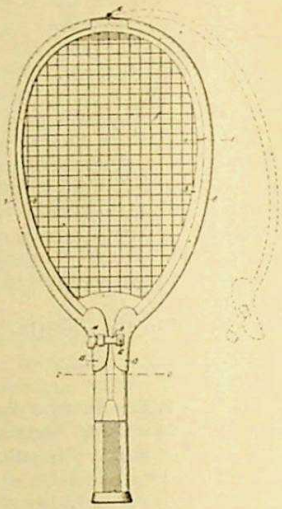
1. A device for use with a cap, comprising a relatively horizontal member having a downwardly extended light absorption area disposed beyond the forward edge of the cap and movable into protecting relation to the range of vision by simple tilting movement of the head.

2. A device for use with a cap having a vizor, comprising a member effectively disposed relative to the vizor and having a downwardly extended light absorption area disposed beyond the forward edge of the vizor, and movable into protecting relation to the range of vision by simple tilting movement of the head, and means for fastening said member to the cap.

3. A device for use with a head covering provided with a forwardly projecting portion, comprising a translucent member extending beyond the forward edge of said portion and having a notch at its rear edge, and a device on the head covering receivable in said notch.

4. In combination with the vizor of a cap and the fastening therefor, a member carried by said cap and overlying said vizor, said member having a forwardly pointed notch at its rear edge to receive said fastener of the cap, and having a downwardly directed translucent light absorption area disposed beyond the forward edge of the vizor.

1,203,786. CASE FOR TENNIS-RACKET FRAMES. FREDERICK RICORDS, Brooklyn, N. Y. Filed Feb. 24, 1916. Serial No. 80,163. (Cl. 46—24.)



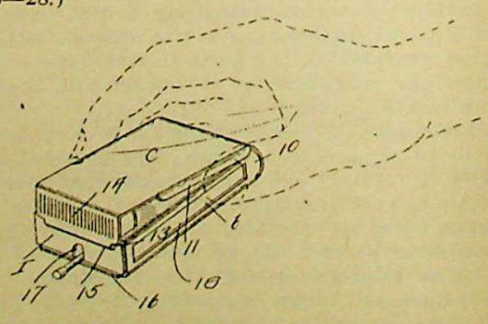
1. In a racket frame case, a case member U-shaped in cross section, the outer face of the case member being curved between its sides to conform with the shape of the racket frame.

2. In a racket frame case, a plurality of case members U-shaped in cross section, the outer faces of the case members being curved between their sides to conform with the shape of the racket frame, and means to secure the case members relatively to each other around the racket frame.

3. In a racket frame case, two case members U-shaped in cross section, the outer faces of the case members being curved between their sides to conform with the shape of the racket frame, the case members being articulated together at one set of ends, and means to secure the case members together at their other ends.

4. In a racket frame case, two case members articulated together at one set of ends, and curved for embracing the frame of a racket, and means to hold the case members relatively to each other at their other ends.

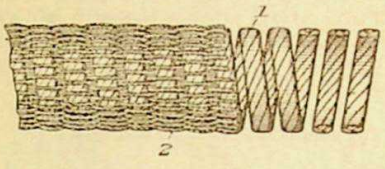
1,203,787. MATCH-BOX. GIDEON RIETVELD, Knoxville, Iowa. Filed Feb. 21, 1916. Serial No. 79,738. (Cl. 206—28.)



A match box formed upon a metal blank bent to produce a tubular section and a spring cover adapted in closed

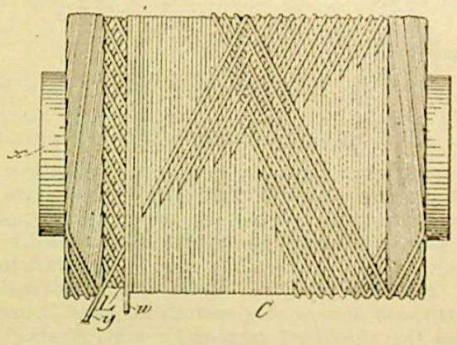
position to overlie the outer end of the tubular section, and a drawer section removably engaged in the tubular section, said drawer section having a longitudinal slot in its bottom and extending into its outer end wall to form a discharge opening for a single match.

1,203,788. FLEXIBLE ELECTRICAL CONDUIT. WILLIAM C. ROBINSON, Pittsburgh, Pa., assignor to National Metal Molding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 3, 1912. Serial No. 701,315. (Cl. 247—4.)



A conduit consisting of a helix formed of a flat strand of twisted paper, in combination with flexible material interwoven therewith.

1,203,789. ELECTRICAL COIL AND METHOD OF WINDING SAME. CLAES RYDEN, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 30, 1915. Serial No. 5,296. (Cl. 175—21.)



1. An improved coil for electrical purposes composed of a series of layers of conducting-material and windings of insulating-material intermingling therewith, with the windings of insulating-material interwoven over and under the turns of conducting-material in each layer and built up at the ends of the layers in a thicker, denser mass than between the layers forming reinforcing abutments at the ends of the coil.

2. An improved coil for electrical purposes composed of concentric layers of helically-wound wire and windings of textile-material disposed crosswise thereof, with the textile windings extending beyond the ends of the wire layers and built up in a thicker, denser mass outside the ends of said layers than between them forming abutments reinforcing both ends of the coil.

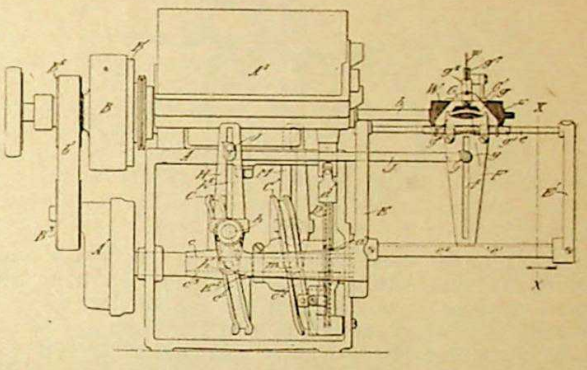
3. An improved electrical coil composed of alternate layers of spirally-wound wire and cross-wound yarn, with the yarn-windings crossing over and under the wire-windings in each layer and extending beyond the ends of the wire layers, at which points the yarn is compacted in a denser mass than between the wire layers forming end abutments of yarn of a diameter in proportion to the diameter of the coil.

4. An improved coil for electrical purposes composed of layers of helically-wound conducting-material and windings of insulating-material disposed diagonally or crosswise thereof, with the windings of insulating-material intersecting the layers of conducting-material and extending beyond their ends, at which points the insulating-material has a greater density and thickness than between the layers thereby providing compact washer-like abutments at the ends of the coil.

5. An improved electrical coil composed of concentric layers of helically-wound wire and overlying layers of yarn-windings, with the yarn-windings disposed crosswise of the wire-windings while intermingling therewith and extending beyond the ends of the wire layers, at which points the yarn layers are of greater thickness than between the wire layers thereby providing dense, compact masses of yarn for supporting and protecting the ends of the wire-windings.

[Claims 6 to 9 not printed in the Gazette.]

1,203,790. WINDING-MACHINE. CLAES RYDEN, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 30, 1915. Serial No. 5,297. (Cl. 242—10.)



1. In a winding machine for winding electrical coils, the combination with a continuously rotating mandrel on which the conducting-material is wound, of a traverse-guide for widing insulating-material diagonally of the windings of conducting-material, and means to reciprocate said guide with a compound traversing-motiotn comprising primary traverses of uniform extent and shorter supplementary traverses occurring at either end of the primary traverses and maintained with a definite relation thereto.

2. In a machine for winding electrical coils, the combination with a continuously rotating mandrel on which the conducting-material is wound, of an oscillating traverse-guide for winding insulating-material diagonally of the windings of conducting-material having a main treverse of constant length extending between fixed limits and a supplemenatry traverse of less extent at both ends of the main traverse whereby the insulating-material is built up at a faster rate at the ends of the coil than between the layers of conducting-material.

3. In a machine for winding electrical coils, the combination with a continuously rotating mandrel for receiving the turns of wire to be wound thereon, of a traverse-guide for winding insulating-material diagonally of the wire-windings, and means to reciprocate the guide with a constant extent of traverse between fixed limits and to also impart to the guide a series of shorter supplementary traverses occurring at the completion of each main traverse and having a definite relation thereto.

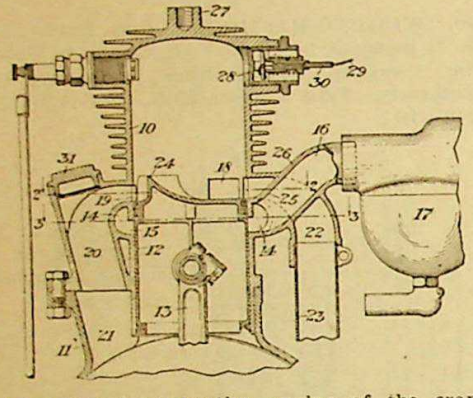
4. In a machine for winding electrical coils, the combination with a continuously rotating mandrel, of means to wind wire on said mandrel in a series of superimposed layers, and means to traverse insulating-material, diagonally with respect to the wire-windings across the full length of the layers thereof and to impart a series of supplementary traverses to the insulating-material at the ends of the wire layers to build the material up in abutments to reinforce the ends of the coil.

5. In a machine for winding electrical coils, the combination with a continuously rotating mandrel for receiving the layers of wire-windings disposed in closely adjacent turns extending between fixed limits, of a traverse-means for winding insulating-material diagonally of the coils of wire-windings and across the full length thereof, and means for operating said traverse-means with a main

traverse equal to the length of the wire layers and supplementary shorter traverses arranged outside the limits of the main traverse and occurring at regular intervals at the completion of each main traverse.

[Claims 6 to 23 not printed in the Gazette.]

1,203,791. CHARGE-TREATING DEVICE FOR INTERNAL-COMBUSTION ENGINES. NORBERT H. SCHICKEL, Stamford, Conn. Filed Dec. 7, 1912. Serial No. 735,464. (Cl. 123—73.)



1. An internal combustion engine of the crank case compression type having a cylinder provided with two annular rows of ports the lower row communicating with the crank case when the piston is at the beginning of the power stroke, and the upper row communicating with the working chamber when the cylinder is at the end of the power stroke, an annular chamber encircling said cylinder at said lower annular row of ports and communicating therewith, two separate chambers directly above said annular chamber and one communicating with a portion of said upper row of ports and the other communicating with the remaining portion of said upper row of ports, a passage connecting one of said second-mentioned chambers with the crank case, an exhaust conduit extending downwardly from the other of said second-mentioned chambers, and a supply conduit leading downwardly to said annular chamber, said conduits being cast integral and one of said conduits extending transversely through the other conduit.

2. A two-cycle engine of the crank case compression type having an exhaust port from the cylinder, an inlet port to the crank case closely adjacent thereto, chambers cast integral with said cylinder and communicating with said ports, a supply conduit leading downwardly to the inlet port chamber, and an exhaust conduit leading downwardly from said exhaust port chamber, said conduits being cast integral with said chambers and said cylinder, and one of said conduits passing transversely through the other.

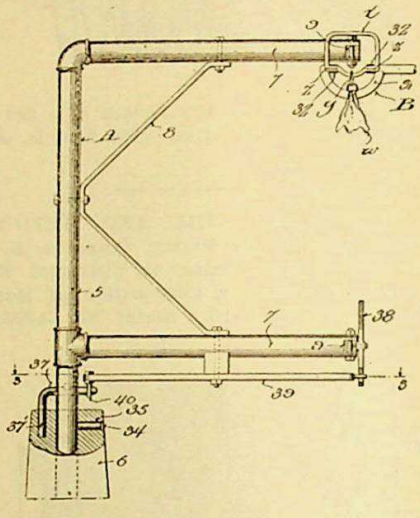
3. A two-cycle engine of the crank case compression type having an exhaust port from the cylinder, an inlet port to the crank case closely adjacent thereto, chambers cast integral with said cylinder and communicating with said ports, a supply conduit leading downwardly to the inlet port chamber, and an exhaust conduit leading downwardly from said exhaust port chamber, said conduits being cast integral with said chambers and said cylinder, and the inlet conduit passing transversely through the exhaust conduit.

4. A two-cycle engine of the crank case compression type having an exhaust port from the cylinder, an inlet port to the crank case closely adjacent thereto, chambers cast integral with said cylinder and communicating with said ports, an inlet conduit leading downwardly to the inlet port chamber, and an exhaust conduit leading downwardly from said exhaust port chamber, said conduits being cast integral with said chambers and said cylinder, the inlet conduit having a horizontally disposed section and a downwardly inclined section, a portion of the latter being disposed above said exhaust conduit and a portion extending transversely through said exhaust conduit.

5. An internal combustion engine having an exhaust port, an inlet port, closely adjacent thereto, chambers cast integral with said cylinder and communicating with said ports, a supply conduit leading downwardly to the inlet port chamber, and an exhaust conduit leading downwardly from said exhaust port chamber, said conduits being integral with said chambers and said cylinder, and one of said conduits passing transversely through the other.

[Claims 6 to 8 not printed in the Gazette.]

1,203,792. MAIL-BAG CATCHING AND DELIVERING APPARATUS. FRED SCHMIDT, South Milwaukee, Wis. Filed Nov. 12, 1915. Serial No. 61,012. (Cl. 258—23.)



1. In a mail bag catching and delivering apparatus, a member including a pair of vertically spaced arms, transverse horizontal bars carried at the ends of said arms, adjacent bar ends being provided with detachable means for holding a bag, the other bar ends being offset inwardly to form receiving fingers, buffer-plates slidably connected with said fingers, and springs disposed between said plates and the shoulders formed by said offsets.

2. In a mail bag catching and delivering apparatus, a member including spaced arms, spaced clip members carried by each arm, each clip member comprising a pair of spring fingers disposed substantially parallel and having adjacent intermediate portions oppositely bowed, bag-carrying loops each having one side engageable in the bowed portions of a clip, and lateral projections on said side of the loop engageable between the fingers.

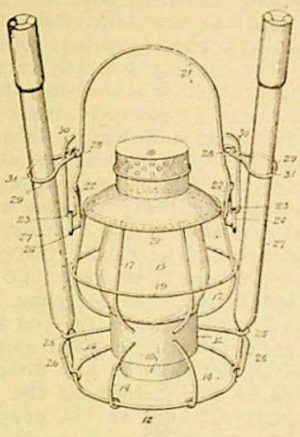
3. A mail catching and delivering apparatus comprising a base, a standard, vertically and rotatably movable in the base, gravity controlled means tending to rotate the standard, an arm carried by the standard for manipulating bags, a lateral projection on the standard, a trigger-arm movable under the projection to hold the standard against movement, and a lever intermediately pivoted to the arm and an angular lever pivoted to the end of the arm and adapted to rock the first lever upon engagement by a train-carried member moving in conjunction with the apparatus.

1,203,793. HAND-LANTERN. RICHARD F. SCHNEIDER, Chicago, Ill. Filed Aug. 9, 1915. Serial No. 44,369. (Cl. 240—1.)

1. The combination with a lantern provided with a pivoted handle, of a fusee-holder comprising means on the lower portion of the lantern for receiving the point of a fusee, and means on the handle for holding the body of the fusee.

2. The combination with a lantern comprising a frame and a handle, of an eye on the lower portion of the frame for receiving the pin of a fusee, and a swinging loop on the handle for holding the body of the fusee.

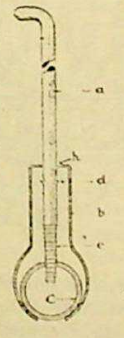
3. The combination with a lantern comprising a handle and a wire frame comprising legs, of an eye on one of the legs for holding the point of a fusee, and means connected to the handle for holding the body of the fusee.



4. The combination with a lantern comprising a handle, of means on the lower portion of the lantern for holding the point of a fusee, and a split loop pivotally connected to the handle for holding the body of the fusee.

5. The combination with a lantern comprising a wire handle, of means on the lower portion of the lantern for holding the point of a fusee, said handle being formed with an eye, and means connected to said eye for holding the body of the fusee.

1,203,794. SUBIRRIGATION DEVICE. PHILIP SCHWARZ and WILLIAM J. BAKER, Oklahoma, Okla. Filed June 23, 1916. Serial No. 105,370. (Cl. 137—65.)

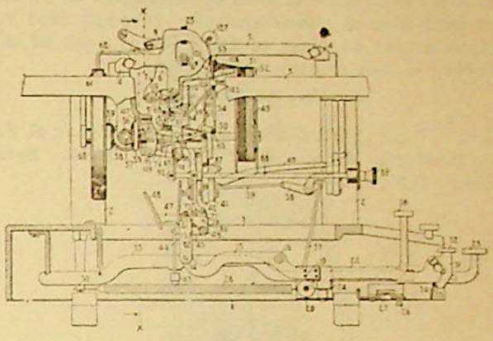


In an irrigating system, an apertured pipe embedded in the ground, and means for preventing the clogging of said aperture and for controlling the flow therethrough comprising a rod accessible from the surface of the ground, and tapered and threaded at its inner end, said threaded, tapered end being received in said aperture and adapted in one position to permit a flow through said aperture, and when moved to a seating position in said aperture to clear the same of foreign matter and to cut off the flow.

1,203,795. TYPE-WRITING MACHINE. GEORGE A. SEIB, Ilion, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Aug. 20, 1915. Serial No. 46,444. (Cl. 197—159.)

1. In a typewriting machine, the combination of a platen, types, case shifting devices, a ribbon vibrator, a support for said vibrator, devices for actuating said vibrator at printing operation independently of said support, and means separate from said vibrator and from said devices constantly tending to shift said support.

2. In a typewriting machine, the combination of a platen, types, case shifting devices, a ribbon vibrator, a vibrator support mounted independently of said case shifting devices, and means operating to shift said support when said case shifting devices are operated.



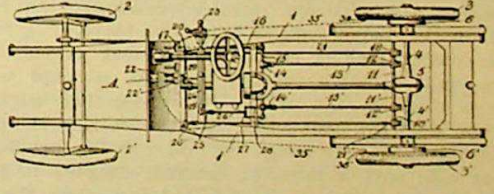
3. In a typewriting machine, the combination of a platen element, a type carrying element, one of said elements being shiftable to change case, case shifting devices, a ribbon vibrator, a vibrator support, and means constantly tending to shift said support, said means being normally restrained by said shiftable element.

4. In a typewriting machine, the combination of a platen element, a type carrying element, one of said elements being shiftable to change case, a ribbon vibrator, a vibrator support movably mounted on the frame of the machine, and a varying connection between said vibrator support and said shiftable element.

5. In a typewriting machine, the combination of a platen element, a type carrying element, one of said elements being shiftable to change case, a ribbon vibrator, a vibrator support movably mounted on the frame of the machine, case shifting devices, and spring means constantly tending to shift said support, said spring means becoming effective when said shiftable element is shifted.

[Claims 6 to 37 not printed in the Gazette.]

1,203,796. AUTOMOBILE. EDWARD D. SELF, Florence, Italy. Filed June 9, 1915. Serial No. 33,155. (Cl. 21—8.)



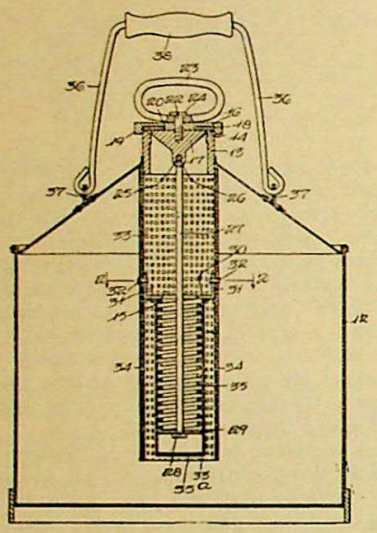
1. In an automobile, the combination of two rear wheels, differential gearing therefor, brakes for said wheels, forwardly extending means for independently actuating said brakes, an indicator visible to the operator of said automobile when applying said brakes, actuating means connecting said wheels to said indicator, said indicator being controlled by said brake actuating means through said wheels, brakes and connections.

2. In an automobile, the combination of two rear wheels, a brake for each of said wheels, respectively, two independently movable rear lever-members for actuating said brakes, tie-rods connected to said lever-members, forward lever-members to which said tie-rods are connected, means for actuating said forward lever-members independently of each other, a lever-carrying countershaft, tie-rods connecting said countershaft to each of said rear lever-members, means for actuating said countershaft so as to apply both of said brakes simultaneously through said rear lever-members, one at least of the ends of each of said countershaft tie-rods having a lost motion connection.

3. In an automobile, the combination of two rear wheels, a brake for each of said wheels respectively, two indedendently movable rear lever-members for actuating said brakes, tie-rods connected to said lever-members, forward lever-members to which said tie-rods are connected, means for actuating said forward lever-members independently

of each other, a lever-carrying countershaft, tie-rods connecting said countershaft to each of said rear lever-members, means for actuating said countershaft so as to apply both of said brakes simultaneously through said rear lever-members, one at least of the ends of each of said tie-rods having a lost motion connection.

1,203,797. CAN FOR GASOLENE, &c. ISAAC E. SEXTON, West Medford, Mass. Filed Sept. 30, 1915. Serial No. 53,248. (Cl. 220—9.)



1. A can having a neck provided with a valve seat, a valve comprising a body composed of a rigid cap-shaped outer member, a rigid tapering inner member and a compressible annular gasket interposed between said members, a bolt connecting said members and causing them to clamp the gasket, a handle projecting outwardly from said body and adapted to turn on said bolt, the latter preventing the handle from tipping relatively to the body, and a spring connected with the valve and adapted to yieldingly hold the gasket on the valve seat, the handle and valve body constituting a practically rigid lever adapted to be fulcrumed on the valve seat to open the valve.

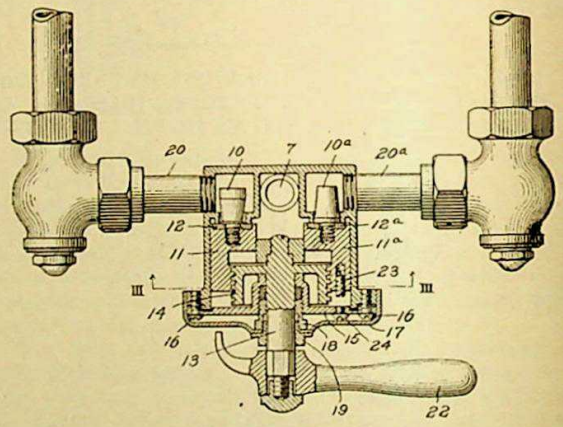
2. In combination, a can having a neck provided with a valve seat, a valve formed to close on said seat, a handle secured to the valve and projecting outwardly therefrom, a spring connected with the valve and adapted to yieldingly seat the same, the valve being provided at its inner side with a tapering member adapted to be fulcrumed on said seat and to slide thereon when the valve is displaced laterally, and a bail hinged to the can and having a handle spaced from the valve handle to permit the manual opening and lateral displacement of the valve by one hand of the operator, the bail constituting a means for holding down the can when the valve is being opened.

3. In combination, a can having a neck provided with a valve seat, a valve formed to close on said seat and composed of a rigid body comprising a cap-shaped rigid outer member, and a tapering rigid inner member adapted to be fulcrumed on said seat and to slide thereon and a compressible gasket clamped between said members, a handle for said valve, means securing the handle to the valve body and having provisions for permitting the handle to turn on an axis perpendicular to the cap member and preventing the handle from tipping relatively thereto, a spring connected with the valve and adapted to yieldingly seat the same, and a bail hinged to the can and having a handle arranged to coöperate with the valve handle in manually opening and laterally displacing the valve, the said valve body and valve handle constituting a practically rigid lever, and the valve handle being adapted to turn independently to a position parallel with the bail handle.

4. A can having a neck provided with a valve seat, a foraminous tube extending downwardly into the can from said neck, a fixed annular spring abutment between the ends of said tube, a valve formed to close on said seat, and provided with a tapering inner member adapted to be fulcrumed on said seat and to slide thereon, a rod jointed to the valve, extending downwardly therefrom through said abutment and provided at its lower end with a spring support located within the tube, and a spring interposed between said support and abutment, the rod being laterally unobstructed between its spring support and the valve, so that it is free to tip laterally in any direction, and the tube being utilized as a container for the spring.

5. A can having a neck provided with a valve seat, a foraminous tube extending downwardly into the can from said neck, a fixed annular spring abutment between the ends of said tube, a valve formed to close on said seat, and provided with a tapering inner member adapted to be fulcrumed on said seat and to slide thereon, a rod jointed to the valve, extending downwardly therefrom through said abutment and provided at its lower end with a spring support located within the tube, a spring interposed between said support and abutment, the rod being laterally unobstructed between its spring support and the valve, so that it is free to tip laterally in any direction, and the tube being utilized as a container for the spring, and a tubular spring guide attached to the annular abutment and preventing lateral deflection of the spring.

1,203,798. MIXING-VALVE. ERNEST J. SIEBER, Ross township, Allegheny county, Pa., assignor to Standard Sanitary Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 30, 1914. Serial No. 874,739. (Cl. 137—26.)



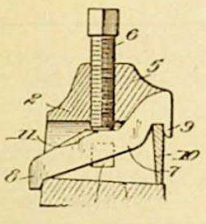
1. In a mixing valve, the combination of a casing comprising a pair of oppositely disposed inlet chambers, a mixing and outlet chamber communicating by ports with the inlet chambers, and guideways for valve members; a pair of valve members unconnected to each other and comprising oppositely graduated plugs adapted to control flow through said ports, and stems secured to said plugs and movable in said guideways, the adjacently disposed faces of said stems being provided with screw threads; and a rotatably mounted operating spindle having a laterally-projecting exteriorly-threaded disk engaging said threaded faces of the stems.

2. In a mixing valve, the combination of a casing comprising a pair of oppositely disposed inlet chambers, a mixing and outlet chamber communicating by valve controlled ports with the inlet chambers, and guideways for valve members; a pair of valve members unconnected to each other and comprising oppositely graduated plugs adapted to control flow to said ports, and stems secured to said plugs and movable in said guideways, the adjacently disposed faces of said stems being provided with screw threads the general planes of which substantially coincide with the longitudinal axes of said plugs; and a rotatably mounted operating spindle having a laterally projecting exteriorly-threaded disk engaging said threaded faces of the stems.

3. In a mixing valve, the combination of an integrally formed cylindrical casing member comprising inlet chambers, a mixing and outlet chamber communicating by

ports with the inlet chambers, oppositely disposed guideways for valve stems and a centrally disposed bearing support for an operating spindle; valve members at opposite sides of the center of the casing and comprising oppositely tapered plugs projecting through said ports, and stems slidably mounted in said guideways and adapted to close said ports, said plugs being rigidly connected to the stems, and the valve guides having concave interiorly facing surfaces provided with screw threads; an operating spindle having its inner end rotatably mounted in said bearing support and having as an integral part thereof a laterally projecting disk provided with screw threads engaging those of said valve stems and a cover secured to said casing, said operating member being held against longitudinal movement by said bearing support and cover.

1,203,799. TOOL-HOLDER. JOHN F. SLAVIK, Poughkeepsie, N. Y. Filed Mar. 9, 1916. Serial No. 83,018. (Cl. 29—99.)



1. A tool holder having a tool-retaining recess, said holder having a second tool-retaining recess, said second tool-retaining recess being enlarged relatively to the first mentioned tool-retaining recess, tool-engaging means for disposition in the second tool-retaining recess, and fastening means common to tools in both of said recesses and said tool-engaging means.

2. A tool holder having a tool-retaining recess, means on the holder intersecting said recess to mount a tool, a dog disposed in said recess to directly engage the tool, and said recess being enlarged to facilitate adjustment of the dog relatively to the tool mounted by the said means.

3. A tool holder having a recess and a recess disposed at an angle to and intersecting said recess, fastening means in the first mentioned recess for a tool therein extending into the second mentioned recess and a clamp means engageable with said fastening means.

4. A tool holder having a recess and a recess disposed at an angle to and intersecting said recess, a dog in the first mentioned recess overlapping the holder to prevent movement of the dog relatively to the holder in one direction and having means to overlap a tool in the second mentioned recess to prevent movement of the dog relatively to the holder in the opposite direction, and a set screw engageable with said dog.

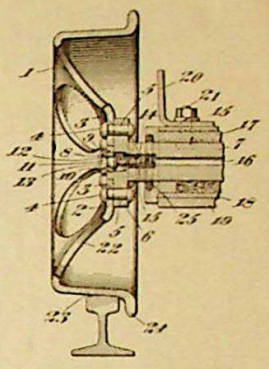
5. A tool holder having a recess and a recess disposed at an angle to said recess and a third recess, a dog within the last mentioned recess, lugs on the dog to overlap the holder and a tool in the third mentioned recess, and a set screw to engage said dog at substantially the point of intersection of the first and second mentioned recesses.

1,203,800. MINE-CAR WHEEL. EDWIN E. SLICK, Westmont borough, Pa. Filed June 9, 1915. Serial No. 32,996. (Cl. 105—172.)

1. The combination with an axle having one or more external journal bearings, of a car wheel provided with a web portion which abuts against and is secured to a projecting flange integral with the end of the axle.

2. The combination with an axle having one or more external journal bearings, of a car wheel provided with a web portion, the side of which abuts, and is secured to, a projecting flange integral with the axle and means for securing the same together.

3. A car wheel provided with a web portion having holes therethrough, in combination with an axle having external journal bearings provided with an integral end collar abutting said web portion, holes through said collar registering with the holes aforesaid and means passing through said holes adapted to secure the wheel to the axle.

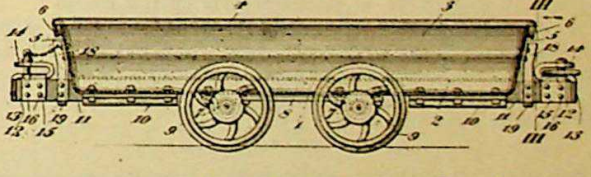


4. An integrally formed plate wheel provided with a web portion, in combination with an axle provided with an integral flange on the end thereof abutting said web portion and means passing through the flange and web portion adapted to secure the same together.

5. A pressed steel plate wheel provided with an impressed web portion, a central opening therein, in combination with an axle provided with an integral flange on the end thereof, an annular projection at the end of said axle, the outer walls of said annular projection and the walls of the central opening in the web being formed concentric with the axle and the wheel and adapted to fit together, and means for securing said web to the flange.

[Claims 6 to 8 not printed in the Gazette.]

1,203,801. CAR-BODY. EDWIN E. SLICK, Westmont borough, Pa. Original application filed June 9, 1915, Serial No. 32,998. Divided and this application filed Nov. 18, 1915. Serial No. 62,083. (Cl. 105—15.)



1. A metallic car body formed integrally of one piece of plate, forming an open box with flaring sides and ends, the upper edge of which is turned over into a bead, thereby providing a finish and stiffener for same, the floor portion having a longitudinal trough formed integral therewith.

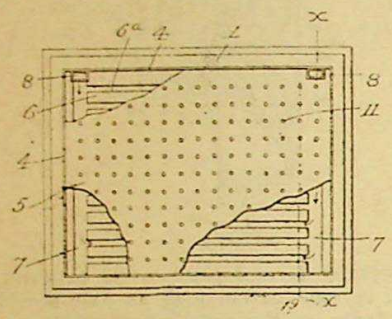
2. A metallic car body formed of a single plate of metal, shaped in the form of an open box with flaring sides and ends, the central portion of the bottom being pressed upwardly into an inverted trough form, extending longitudinally near the center of the car body, thereby providing a combined stiffener and center sill for the same.

3. A car body formed integrally from one plate of metal of open box form, with flaring sides, the center portion of the plate bottom being formed upwardly into an inverted trough shape, extending longitudinally of the car, the upper edges of the sides and ends being turned over into a bead, thereby providing a finish and stiffener for the same.

1,203,802. APPARATUS FOR ETCHING PLATES IN THE PHOTO-ENGRAVING PROCESS. JOHN J. C. SMITH, Passaic, N. J., assignor to Paul M. Hammalian, Hackensack, N. J. Filed Aug. 21, 1912. Serial No. 716,244. (Cl. 41—9.)

1. An apparatus for applying etching fluids to plates, having in combination a tank for the etching fluid, means in said tank for discharging and uniformly distributing air throughout the body of the fluid in said tank, said means comprising a series of air ducts arranged in the bottom of the tank, each of said air ducts having a plu-

rality of discharge openings along its length, said openings being submerged in the fluid in the tank, air chests at the opposite ends of said air ducts into which each of said ducts opens, means for supplying air under pressure to said air chests, means for supporting a plate in a horizontal position in said tank and means for moving said plate and holder into and out of contact with the liquid in said tank.

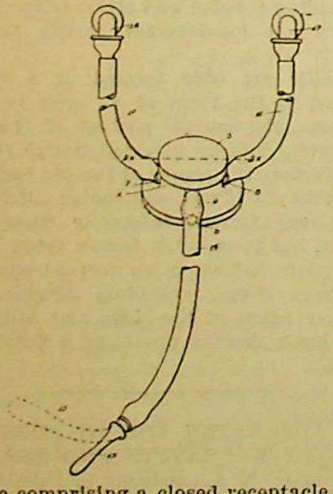


2. An apparatus for applying etching fluids to plates, comprising a tank for holding the fluid, a plurality of spaced-apart strips on the bottom of said tank, a perforated false bottom covering said strips and inclosing the spaces therebetween to form a plurality of air passages, the perforations in said false bottom registering with said spaces, transverse air passages beneath said false bottom at each end of said strips and communicating with each of the air passages between said strips, means for delivering air to said transverse air passages, a plate holder supported in said tank for holding the plate to be etched substantially parallel with the level of fluid in said tank and means for moving said plate holder into and out of the liquid in the tank.

3. An apparatus for applying etching fluid to plates, having an air distributing plate that is provided with uniformly spaced openings, means for supplying equal proportions of air to said openings and means for supporting a plate in proximity to said air distributing plate.

4. An apparatus for applying etching fluid to plates, having an air distributing plate that is provided with uniformly spaced openings, channels communicating with said openings and passages for supplying opposed currents of air to said channels.

1,203,803. VAGINAL SYRINGE. LOUISE T. SPEERS, Rochester, N. Y. Filed Mar. 27, 1916. Serial No. 87,045. (Cl. 128—25.)



1. A syringe comprising a closed receptacle, a removable cover therefor, a pair of admission ducts leading into the side of said receptacle, an outlet leading out of the side of said receptacle and into a nozzle or other interchangeable instrument.

2. A syringe comprising a closed receptacle, a removable cover therefor, a pair of admission ducts leading into the side of said receptacle, an outlet leading out of the side of said receptacle and into a nozzle, means contained in said receptacle to receive a medicated wafer or tablet.

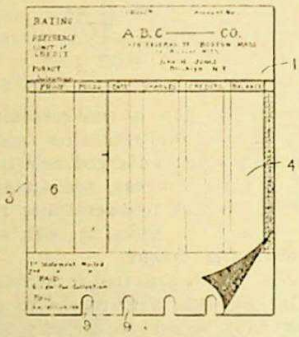
3. A syringe comprising a closed receptacle, a removable cover therefor, a pair of admission ducts leading into the side of said receptacle, an outlet leading out of the side of said receptacle and into a nozzle, a perforated box in said receptacle to receive a medicated wafer or tablet.

4. A syringe comprising a receptacle, a cover removably fastened to said receptacle, a series of ducts leading into and out of the side of said receptacle, said receptacle being adapted to receive a medicated wafer or tablet, means to admit water through some of said ducts into said receptacle and dissolve and absorb the medicated wafer, another of said ducts being adapted to drain the solution from said receptacle.

5. A syringe comprising a cup shaped receptacle having a base at the bottom and a removable cover at the top thereof, a perforated box inside of said receptacle to receive a medicated wafer or tablet, a series of ducts leading into and out of the side of said receptacle.

[Claims 6 to 8 not printed in the Gazette.]

1,203,804. LEDGER-SHEET. GEORGE R. STEELE, Newtonville, Mass. Filed Jan. 20, 1914. Serial No. 813,309. (Cl. 11—11.)



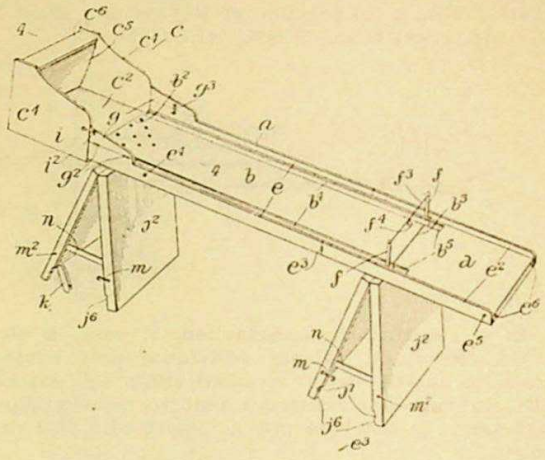
1. A loose leaf ledger sheet and statement adapted for a vertical filing system comprising a single sheet of paper folded transversely of the center of its width to form an original leaf and a duplicate leaf, said leaves being provided with duplicate printed matter and columns for business entries adapted to be superposed in the folded sheet, each sheet having at its end printed matter and columns arranged to present a statement of account and adjacent the fold printed matter and columns for confidential entries, the duplicate sheet being provided with a weakened line along the side of the statement whereby said statement may be detached.

2. A loose leaf ledger sheet and statement adapted for a vertical filing system comprising a pair of leaves formed from a single sheet of paper transversely folded to form an original leaf and a duplicate leaf, the fold extending longitudinally thereof, said leaves being provided with printed matter and columns for business entries adapted to be superposed in the folded sheet, the original leaf being coated on the reverse side with a transfer material, one portion of the printed matter and the columns being arranged to present a statement of account, the other portion thereof being arranged for confidential entries, a perforated line parallel to said fold interposed between the statement of account and the confidential memoranda and a transverse perforated line arranged between the statement portion and the stub portion whereby the statement may be detached and leave the stub for a permanent record.

1,203,805. GAME DEVICE. JACOB F. STEPHAN, New York, N. Y. Filed May 11, 1916. Serial No. 96,747. (Cl. 46—61.)

1. In a collapsible game device of the class described, a main central portion having side walls and said central portion being provided with hinged end portions which are adapted to fold onto said central portion, said side

walls having hinged end portions which are adapted to fold onto said walls and are detachably connected therewith, and means in said hinged end walls adapted to enter the corresponding hinged end portion of the main central portion to support said end in its open or operative position.



2. In a collapsible game device of the class described, a main central portion having side walls, said central portion being provided with hinged end portions which are adapted to fold onto said central portion, said side walls having hinged end portions which are adapted to fold onto said walls and are detachably connected therewith, means in said hinged end walls adapted to enter the corresponding hinged end portion of the main central portion to support said end in its open or operative position, and means for locking said hinged side walls in connection with said hinged end portion.

3. In a collapsible game device of the class described, a main central portion provided with hinged end portions which are adapted to fold onto said central portion, one of said hinged end portions being composed of a bottom hinged to the end of the central portion, sides hinged to the bottom member, a back hinged to the rear end portion of the bottom member and inclined forwardly and provided with a hinged top member, said side members being detachably connected with the rear end portion of the central member and the top member being detachably connected with the side members.

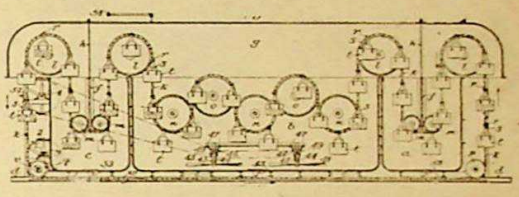
4. In a collapsible game device of the class described, a main central portion having side walls, said central portion being provided with hinged end portions which are adapted to fold onto said central portion, said side walls having hinged end portions which are adapted to fold onto said walls and are detachably connected therewith, means in said hinged end walls adapted to enter the corresponding hinged end portion of the main central portion to support said end in its open or operative position, means for locking said hinged side walls in connection with said hinged end portion, and standards pivoted to the hinged side walls adjacent to the corresponding end of the central portion and provided with a flexible connection on which is mounted an alarm device.

5. A collapsible game device having folding end portions and folding side portions, and a container composed of a casing divided transversely to form two separate similar parts each of which consists of separate similar members hinged together at one end, and means for locking the separate parts of said casing together end to end, and means for locking the separate members of each of said parts together.

[Claims 6 to 11 not printed in the Gazette.]

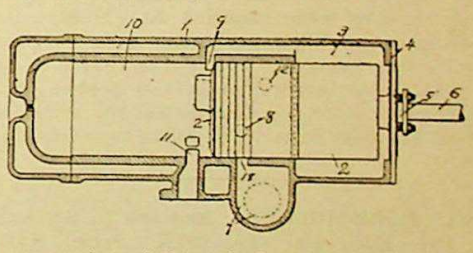
1,203,806. PASTEURIZING-MACHINE. HENRY F. STOCK, Waukesha, Wis. Filed June 21, 1911. Serial No. 634,530. (Cl. 126—272.)

In a pasteurizing machine the combination of warming, pasteurizing and cooling tanks arranged in series in the order named and adapted to contain water respectively, the warming and cooling tanks each being provided with partitions extending down toward the bottoms of said tanks but terminating short of said bottoms to permit the passage of a conveyer and bottles thereunder, a hood extending over said tanks and covering the tops thereof and projecting beyond the warming and cooling tanks and being open on the under side beyond said warming and cooling tanks and provided with partitions in its interior making steam-tight joints with the partitions in the warming and cooling tanks to provide a steam or vapor space over parts of the warming and



cooling tanks and over the pasteurizing tank, and an endless conveyer for bottles passing up into the hood outside of the warming tank down into the warming tank under the partition therein and up through the warming tank into the steam space in the hood thence down into the pasteurizing tank and up out of the pasteurizing tank into the steam space in the hood, then down into the cooling tank under the partition therein and up through the cooling tank into the hood and down from the hood outside of the cooling tank and under the cooling, pasteurizing and warming tanks.

1,203,807. CYLINDER FOR GAS-ENGINES. HARRY C. STOLZ, Franklin, Pa. Filed Apr. 26, 1915. Serial No. 23,889. (Cl. 123—73.)

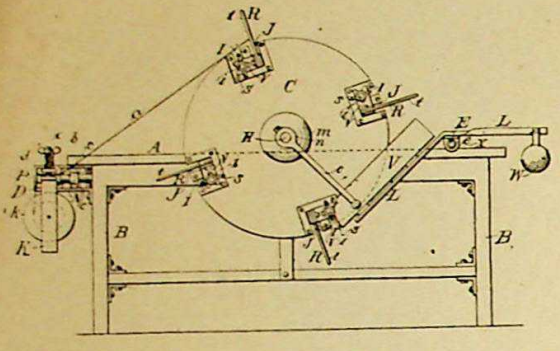


In a gas engine of the valveless two-cycle type, a cylinder comprising a combustion chamber and a pump chamber constituting an extension of the combustion chamber and having a portion arranged coaxial with and being of larger diameter than the combustion chamber, inlet and exhaust ports for the combustion chamber, a passage leading from the enlarged portion of the pump chamber to the inlet port, the walls of the enlarged portion of the pump chamber being otherwise solid and uninterrupted, a piston operable in the chambers, the pump chamber being provided in its wall with separate and circumferentially alined air and gas intake ports over which the piston operates for closing and opening the same, said piston on its compression stroke moving past the last mentioned ports to uncover the same and permit an influx of gas and air into the pump chamber, and a single combined air and gas intake port provided in the pump chamber at a point between the enlargement of the latter and the first ports of said pump chamber and opened and closed by the piston so that when the piston uncovers said combined air and gas intake port a uniform vacuous condition will exist in the pump chamber to permit of a uniform quantity of the combustible mixture being drawn in on the initial strokes, which are imparted by an exterior agency, in effecting a starting of the engine.

1,203,808. INSULATION-FORMING MACHINE. MAURICE SULLIVAN, New York, N. Y. Filed Nov. 16, 1915. Serial No. 61,756. (Cl. 154—1.)

1. The combination in an insulation forming machine, of a disk rotating form of mold, fitted with radial chan-

nels extending inwardly from the outer edge of the mold and at right angles to each other, a system of adjustable sliding partitions and their attachments for fastening fitted in said channels, and a tapering slit cut in the center of each partition as fully described and set forth.

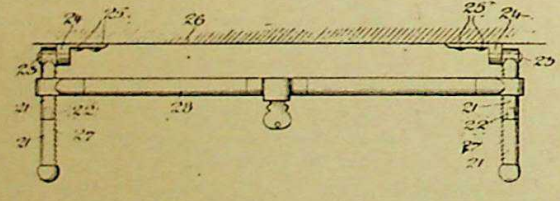


2. The combination in an insulation forming machine, of a projecting and adjustable fulcrum, a balance lever resting on the fulcrum, a forming trowel attached to one end of balance lever, and an adjustable balance weight on the other end, all substantially as set forth.

3. An insulation forming machine comprising a disk form of mold mounted on a mandrel or shaft to rotate, said mold fitted with recesses or channels for the reception of two or more adjustable dividing partitions, each partition provided with a tapering slit in center and projecting inwardly to the face of the mold, a balanced lever trowel engaging the face of the mold and regulated by a balance weight, the balance lever resting and supported on a projecting fulcrum which is adjustable all substantially as set forth.

4. The combination in an insulation forming machine of a disk form of mold mounted on a shaft and fitted with adjustable dividing partitions each partition provided with a tapering slit cut in the center, a balanced lever trowel, and balance weight supported on an adjustable fulcrum and so arranged that the trowel engages the face of the disk form while same is revolving.

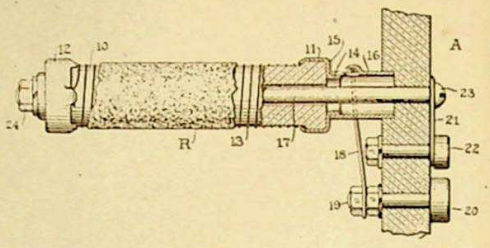
1,203,809. ROBE-HOLDER. EDWARD L. SWIKARD, Chicago, Ill. Filed Mar. 10, 1916. Serial No. 83,268. (Cl. 45—13.)



1. A robe holder comprising a pair of studs enlarged at their outer ends and provided at their inner ends with feet having openings therein to receive fastening screws, whereby said studs may be independently mounted on a supporting structure, rigid teeth on said studs, a hollow bar having means at either end thereof to embrace said studs between said feet and the enlarged outer ends, the openings in said feet being disposed behind said bar, whereby removal of the screws is prevented until said bar is first removed, spring-pressed members within said bar adapted to engage said teeth, and key-controlled means to disengage said members from said teeth.

2. A robe holder comprising a pair of independent studs, each comprising a plurality of threaded connected sections provided with ratchet teeth, means pivotally connected to said studs to support the latter in spaced relation, a hollow bar having means at either end to embrace said studs, spring-pressed members within said bar to engage said teeth, said members and teeth being formed to allow relative movement in one direction only while said members and teeth remain in engagement, and key-controlled means to disengage said members from said teeth.

1,203,810. RHEOSTAT. LEWIS L. TATUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 21, 1916. Serial No. 79,663. (Cl. 219—63.)



1. In a rheostat, in combination, a base, a circuit terminal therein, a tubular resistance unit having a terminal to fit said circuit terminal and a bolt extending axially through said resistance unit to demountably secure the same to said base and in contact with said circuit terminal.

2. In a rheostat, in combination, a base, a circuit terminal therein, a tubular resistance unit having a terminal to fit said circuit terminal and a bolt extending axially through said resistance unit to demountably secure the same to said base and in contact with said circuit terminal, said bolt being connected to the opposite terminal of said unit to serve as an extension therefor.

3. In a rheostat, in combination, a base, a bolt fixed to and projecting from said base, a circuit terminal fixed to said base and a tubular resistance unit removably mounted on said bolt and having a terminal to engage said circuit terminal.

4. In a rheostat, in combination, a base, two circuit terminals thereon, one having an extension, and a tubular resistance unit removably mounted on said terminal extension, said unit having a terminal to be connected to said extension and a second terminal to engage the remaining circuit terminal on said base.

5. In a rheostat, in combination, a base, a circuit terminal thereon having an extension, a tubular resistance unit removably mounted on said terminal extension and electrically connected thereto, and means at the outer end of said unit to releasably secure the same on said extension.

[Claims 6 to 9 not printed in the Gazette.]

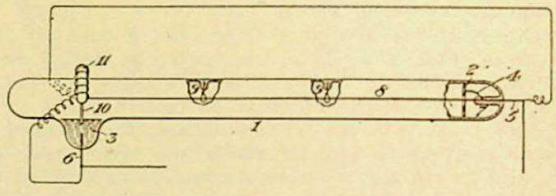
1,203,811. AUTOMOBILE-JACK. ALVA R. TAYLOR, Vernon, Tex. Filed Nov. 2, 1914. Serial No. 869,868. (Cl. 254—91.)

1. An automobile jack comprising a wheeled frame, transverse shafts mounted in the ends of the frame, radially extending arms mounted on the shaft, a supplemental frame pivotally mounted on the upper ends of the said arms, an extension at one end of the wheeled frame, a lever pivotally mounted in the end of the extension, a link pivotally connected at one end to the adjacent end of the supplemental frame, and at its other end to the lever, the lever end of the link being downwardly curved whereby it will pass below the pivot point of the lever when said lever is moved into a horizontal position, blocks arranged on the front end of said supplemental frame for supporting the front axle of a vehicle, and upstanding members disposed on the rear end of said frame for sup-

porting the rear axle of the vehicle, and having their forward ends undercut to provide recesses for the reception of the bracing rods of the rear axle.

2. An automobile jack comprising a main frame, a supplemental frame, means to vary the distance between said frame and connecting the frames, and rear axle supports carried by the supplemental frame and each consisting of an upstanding member having a concave upper surface to receive the body of the axle and provided with undercut portions for the reception of the bracing rods of such axle.

1,203,812. MERCURY-VAPOR APPARATUS. PERCY H. THOMAS, East Orange, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed July 19, 1904, Serial No. 217,170. Divided and this application filed Oct. 19, 1904. Serial No. 229,048. (Cl. 176—47.)



1. In a vapor electric apparatus wherein a filament extends through practically the entire distance between the main electrodes, a positive electrode in the form of a thin plate or disk surrounding the said filament, and connected to the positive lead-wire by a high resistance conductor.

2. In a vapor electric apparatus wherein a filament extends through practically the entire distance between the main electrodes, a positive electrode in the form of a thin plate or disk surrounding the said filament, the filament being connected to the positive lead-wire and the ring electrode being also connected to the said lead-wire by a high resistance conductor.

3. A vapor electric apparatus adapted to operate in a horizontal position, comprising a suitable container and a positive and a negative electrode therein, in combination with a filament extending from the positive lead-wire into proximity to the negative electrode, and a tip on said filament composed of magnetic material, and a magnet in circuit of the apparatus adapted to separate the said tip from the negative electrode when the circuit of the apparatus is closed.

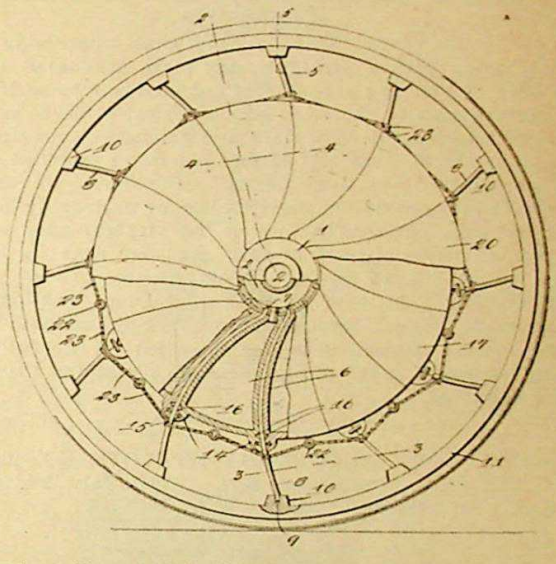
1,203,813. VEHICLE-WHEEL. LEWIS W. THORP, Springfield, Mo. Filed Mar. 6, 1916. Serial No. 82,436. (Cl. 152—28.)

1. A wheel of the class described comprising a hub, a rim, resilient spokes interposed between said hub and rim, said hub provided with an inflating channel, a plurality of inflatable bags communicating with said channel and interposed between said resilient spokes.

2. A wheel of the class described comprising a hub, a rim, resilient spokes interposed between said hub and rim, said hub provided with an inflating channel, a plurality of inflatable bags communicating with said channel and interposed between said resilient spokes, and side strips carried by the sides of said inflatable bags for preventing the same from bulging laterally while being compressed.

3. A wheel of the class described comprising a hub, a rim, resilient spokes interposed between said hub and rim, said hub provided with an inflating channel, a plurality of inflatable bags communicating with said channel and interposed between said resilient spokes, side strips carried by the sides of said inflatable bags for preventing the same from bulging laterally while being compressed, and means for anchoring said bags in engagement with said spring spokes.

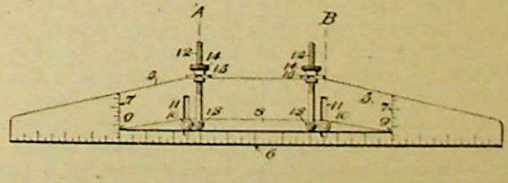
4. A resilient wheel of the class described comprising a hub, a rim, spring spokes interposed between said rim and hub, a plurality of pneumatic bags interposed between said spokes, each bag provided with a channel portion upon each edge for constituting a socket for said spokes, means for forming a communication between said pneumatic bags and hub, said hub provided with an air channel, each bag provided with a projecting lug upon the outer end thereof and near each side, means passing through the lugs of the adjoining bags and straddling said resilient spokes for anchoring said bags in engagement with said spokes.



5. A resilient wheel of the class described comprising a hub, a rim, spring spokes interposed between said rim and hub, a plurality of pneumatic bags interposed between said spokes, each bag provided with a channel portion upon each edge for constituting a socket for said spokes, means for forming a communication between said pneumatic bags and hub, said hub provided with an air channel, each bag provided with a projecting lug upon the outer end thereof and near each side, means passing through the lugs of the adjoining bags and straddling said resilient spokes for anchoring said bags in engagement with said spokes, and protector means fitting upon the sides of said inflatable bags for preventing the same from bulging outwardly.

[Claims 6 to 8 not printed in the Gazette.]

1,203,814. PLANER-KNIFE-SETTING GAGE. ARTHUR TOMKINSON, Grindrod, British Columbia, Canada. Filed Apr. 30, 1915. Serial No. 24,989. (Cl. 33—185.)

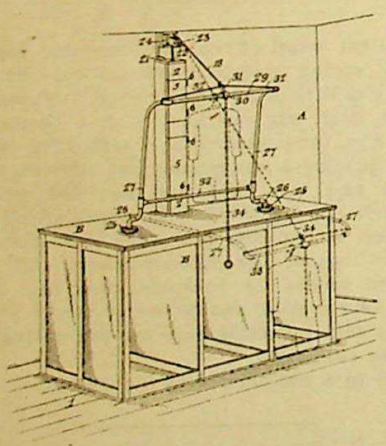


1. A wood planer knife setting gage which comprises a thin flat straight edge plate having a pair of slots extending normal to the straight edge, a gage bar slidable on the face of the straight edge plate, said gage bar being of less length than the length of the straight edge plate and having its edges shaped to form pointers, said straight edge plate having graduated lines normal to the straight edge face at each end of said gage bar to coöperate with the same, bolts passing through said slots and through said gage bar to adjustably secure said gage bar to said straight edge plate, screw adjusting devices connected to said gage bar, and devices on said straight edge plate for engaging said screw adjusting devices, all being arranged substantially as shown and for the purposes described.

2. A wood planer knife setting gage, comprising the combination with a straight edge graduated along its edge and having graduated lines adjacent to each end at right angles to the edge, of a gage bar slidable on the face of the straight edge and extending between the graduated lines each end of said bar being reduced to form an indicating point, means for securing the gage bar on the face of the straight edge said means comprising a bolt through the straight edge and the gage bar adjacent to each end of the bar, said bolt movable in an elongated slot in the straight edge, and an adjusting screw at each end of the bar.

3. A wood planer knife setting gage comprising the combination with a straight edge plate graduated along its edge and having graduated lines adjacent to each end at right angles to the edge, of a gage bar slidable on the face of the straight edge plate and extending between the graduated lines, each end of said bar being provided with pointer members to form an indicating device to coöperate with said graduated lines, means for adjustably securing the gage bar on the face of the straight edge plate, a pair of bolts pivoted to said gage bar near its ends, nuts on said bolts having circumferential grooves, and plates secured to said straight edge plate and having recesses to project into said nut grooves and hold said nuts against movement in the direction of the bolt, all being arranged substantially as shown and for the purpose described.

1,203,815. FORM FOR DISPLAYING CLOTHING. AARON J. TORRISON, Manitowoc, Wis. Filed July 20, 1915. Serial No. 40,989. (Cl. 211—14.)



1. The combination with a show case or counter, of a display frame comprising relatively long spaced bars or uprights and a connecting transverse bar, means on top of the show case or counter spaced a relatively short distance inwardly of the lateral edge thereof for pivotally mounting the ends of the bars or uprights to the show case or counter, means for maintaining the display frame in an upright position above the show case or counter so that garments hung from the transverse bar will be held in an elevated position, said means permitting the display frame to be swung down to a horizontal position, thereby causing the transverse bar to project beyond one side of the counter or show case.

2. The combination with a show case or counter, of a display frame comprising spaced bars, the upper terminals of the bars being curved and extended forwardly, and a transverse bar connecting said curved ends causing the transverse bar to project below the plane of the top of the show case or counter when the display frame is in its lowered position, means for pivotally connecting the lower ends of the bars or uprights to the show case or counter, means for maintaining the display frame in an upright position above the show case or counter, so that garments hung from the transverse bar will be held in an elevated position, said means permitting the display frame to be swung down in a horizontal position.

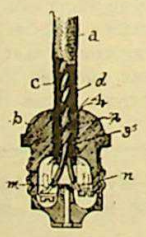
3. The combination with a show case or counter, of a pair of uprights pivoted on the counter and adapted to project upwardly above the same and being of a length to project laterally therebeyond when swung downwardly into a horizontal position, a transverse bar joining the upper ends of the uprights, and being offset forwardly from the plane thereof whereby upon the downward swinging of the uprights the transverse bar is disposed laterally beyond the edge and below the plane of the top of the show case or counter.

4. The combination with a counter or show case, of spaced apart brackets mounted on the top of the counter or show case, uprights pivoted at their lower ends upon the brackets, and having outwardly curved upper ends, a cross bar joining the outer extremities of said curved ends, and adapted to receive the goods to be displayed, a collar rotatably mounted on the cross bar, a cable secured at one end to the projections, a pulley disposed above and rearwardly of the sleeve, and over which the cable is supported, and a weight on the opposite end of the cable to counter-balance the weight of the cross bar and the goods carried thereby.

5. The combination with a show case or counter, of a pair of uprights pivoted in longitudinally spaced apart relation upon the top of the counter, a cross bar joining the upper ends of the uprights to receive goods to be placed on display, means for maintaining the uprights in vertical position to support the goods high above the show case or counter, the pivotal connections between the uprights and the show case or counter being each spaced inwardly an equal distance from the lateral edge of the counter, and the standards being of a greater length than said distance, whereby upon the downward swinging of the uprights said cross bar is caused to project beyond the lateral edge of the counter or show case and substantially in parallelism therewith.

[Claim 6 not printed in the Gazette.]

1,203,816. ELECTRICAL CONNECTION. WILLIAM C. TREGONING, Cleveland, Ohio, assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 9, 1912. Serial No. 735,870. (Cl. 173—322.)



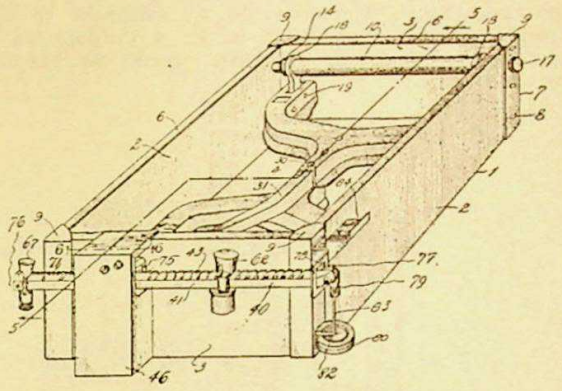
1. An insulating cord gripping device comprising a one-piece member of insulating material having a bore therethrough, said bore having a threaded portion for threaded engagement with the compressible insulating material of a conductor, a smooth portion for guiding said compressible insulating material into the threaded portion, and a rounded off edge to prevent injury to the insulating material due to the bending of the conductor.

2. An insulating cord gripping device comprising a one-piece member of insulating material having a bore therethrough, said bore having a threaded portion for threaded engagement with the compressible insulating material of a conductor, a smooth portion for guiding said compressible insulating material into the threaded portion, a rounded off edge to prevent injury to the insulating material due to the bending of the conductor, and an electrical contact carried by said member.

3. An insulating cord gripping device comprising a one-piece member of insulating material having a bore therethrough, said bore having a threaded portion for threaded engagement with the compressible insulating material of a conductor, a smooth portion for guiding said compres-

sible insulating material into the threaded portion, a rounded off edge to prevent injury to the insulating material due to the bending of the conductor, and a binding post carried by said member.

1,203,817. SCALE. JAMES M. TRINER, Chicago, Ill. Filed Apr. 6, 1914. Serial No. 829,903. (Cl. 73—121.)



1. In a scale the combination of a plurality of scale levers, a scale beam, a sheet metal box inclosing said scale levers, reinforcing angle pieces rigidly secured to the outside of said sheet metal box and foot and top portions for said box integral with said angle pieces.

2. In a scale the combination of a plurality of scale levers, a scale beam, a member supporting the fulcrum for that scale beam, a connecting link between said scale beam and one of said scale levers, a sheet metal box for said scale levers, and a common housing for said connecting link and said supporting member; said scale beam being provided with graduations extending from both of its ends inwardly to a portion adjacent the fulcrum of said scale beam, said common housing inclosing the portion of said scale beam which is free of graduation marks, while the portions of said beam provided with said marks project from said housing at both sides of the same.

3. In a scale the combination of a plurality of scale levers, a scale beam, a connecting link between said scale beam and one of said scale levers, a sheet metal box inclosing said scale levers, said sheet metal box having lateral and end walls and bottom and top closure, and a housing mounted on said sheet metal box for said connecting link, the housing being open at the bottom.

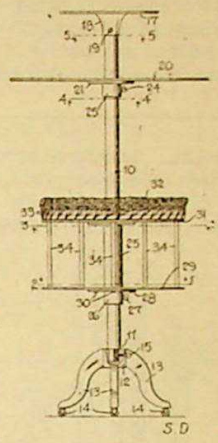
4. In a scale the combination of a plurality of scale levers, a frame surrounding said levers, suspension rods for the levers detachably secured to opposite walls of the frame, and links connecting said levers with said suspension rods, the rods being provided with a bearing portion for engagement with said links.

5. In a scale the combination of a plurality of scale levers, a frame surrounding said levers, suspension rods for the levers secured in opposite walls of the frame, and links connecting said levers with said rods, the rods being provided with means for limiting lateral movement of the links with respect to the rods.

[Claims 6 to 54 not printed in the Gazette.]

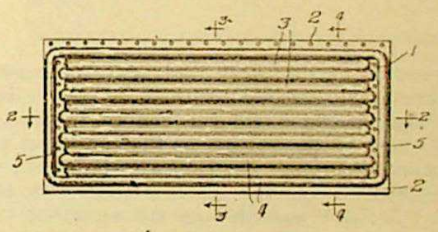
1,203,818. COMBINED ROTATABLE TABLE, BOOK-SHELF, AND LAMP-SUPPORT. SAM D. TRINKL, Huntington, Tex. Filed Mar. 4, 1916. Serial No. 82,168. (Cl. 45—26.)

A table comprising a standard, a base to which the standard is detachably connected, a top supporting element detachably mounted upon the upper end of the standard, a sleeve mounted upon the standard, a vertically adjustable collar on the standard upon which the sleeve normally rests and is rotatably mounted, upper and lower article supporting plates mounted upon the sleeve and rotatable therewith, braces connecting said plates, said braces constituting partitions for the space between the plates, the upper plate being provided with an upwardly



extending wall whereby the upper plate may constitute the bottom of a work basket.

1,203,819. METAL WALL FOR RAILWAY-CARS. WILLIAM T. VAN DORN, Chicago, Ill. Filed Feb. 20, 1915. Serial No. 9,516. (Cl. 189—85.)



1. A metal sheet of the character described, provided with a series of parallel corrugations extending nearly across the same, the corrugations being arranged in two groups alternating with each other, the corrugations of one group being longer than those of the other group and projecting somewhat beyond each end of the latter, and the corrugations of one group extending inwardly from the plane of the edges of the sheet and the corrugations of the other group extending outwardly from said plane.

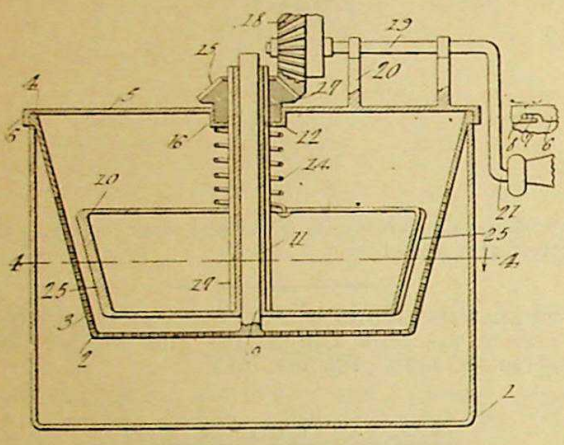
2. A metal sheet of the character described, provided with a series of parallel corrugations extending nearly across the same, the corrugations being arranged in two groups alternating with each other, the corrugations of one group being longer than those of the other group and projecting somewhat beyond each end of the latter, the corrugations of one group extending inwardly from the plane of the edges of the sheet and the corrugations of the other group extending outwardly from said plane, and transverse corrugations extending between and connected to the outermost corrugations and forming with the same a frame inclosing the remaining corrugations.

3. A metal sheet of the character described, provided with a series of parallel corrugations extending nearly across the same, half of the corrugations at each end extending somewhat beyond the others and alternating therewith, and transverse corrugations extending across the sheet in close proximity to the aforesaid corrugations and forming with the two outermost of the aforesaid corrugations a frame inclosing the remaining corrugations.

4. A metal sheet of the character described having a continuous corrugation extending around the same just within the edges thereof, the space within the frame being filled with parallel corrugations, the ends of half of which extend into close proximity to the end members of said frame while the other half of the corrugations alternating with the remainder have their ends terminating at a somewhat greater distance from the said end members of the frame.

5. A metal sheet of the character described, having a continuous corrugation arranged just within the edges thereof and forming a frame-like member, the space within said frame-like member being completely filled with corrugations lying parallel with one of the edges of the sheet and extending at their ends into close proximity to the end of the frame-like corrugation.

1,203,820. COLANDER. MARIE STEWART WALES, Oak Creek, Colo., assignor of one-fourth to Margaret Bailey and one-fourth to Rose May Sievers, Oak Creek, Colo. Filed May 17, 1915. Serial No. 28,685. (Cl. 146—9.)

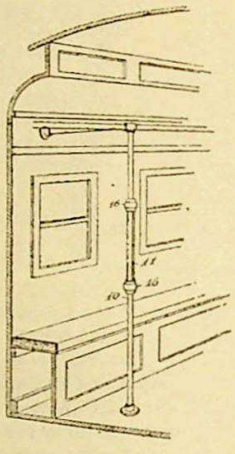


1. In a device of the class described, a vessel; a foraminous container extended within the vessel and supported on the vessel; a lid for the container; a fixed standard secured to the bottom of the container and projecting upwardly through the lid; a compression member in the container; a tubular bearing carried by the compression member and mounted on the standard to rotate and to slide thereon, the bearing projecting upwardly through the lid; a compression spring surrounding a part of the bearing, the upper end of the spring abutting against the lid and the lower end of the spring abutting against the compression member; and a wheel supported on the lid, the standard and the bearing passing through the wheel, the bearing being keyed to the wheel to connect the wheel and the bearing for simultaneous rotation, and to permit the compression member to move upwardly and downwardly.

2. In a device of the class described, a vessel; a foraminous container extended within the vessel and supported on the vessel; a lid for the container; a fixed standard secured to the bottom of the container and projecting upwardly through the lid; a hollow compression member in the container and including a top and a bottom; a tubular bearing connecting the top and the bottom of the compression member to serve as a reinforcement therefor, the bearing being mounted on the standard to rotate on the standard and to slide on the standard, the bearing extended upwardly through the lid; a compression spring surrounding part of the bearing, one end of the compression spring abutting against the top of the compression member, the other end of the compression spring abutting against the lid; a wheel supported on the lid, the bearing and the standard passing through the wheel, the bearing being keyed to the wheel to secure the simultaneous rotation of the wheel and the bearing, and to permit the compression member to rise and fall.

3. In a device of the class described, a vessel; a foraminous container extended within the vessel and supported on the vessel; a lid for the container; a fixed standard secured to the bottom of the container; a compression member in the container; a tubular bearing carried by the compression member and mounted to rotate on the standard and to slide theeron, the bearing projecting upwardly through the lid; a compression spring surrounding a part of the bearing, the lower end of the compression spring abutting against the compression member, and the upper end of the spring abutting against the lid; and a wheel supported on the lid, the bearing passing through the wheel and being keyed thereto, to secure a simultaneous rotation of the wheel and the compression member, and to permit the compression member to rise and fall.

1,203,821. GRAB-HANDLE FOR STANCHIONS. WILLIAM M. WAMPLER, New York, N. Y., and WALTER L. CONWELL, Upper Montclair, N. J., assignors to The Ellcon Company, New York, N. Y., a Corporation of New York. Filed July 19, 1916. Serial No. 110,031. (Cl. 105—31.)



1. In combination, a rigid post, a sleeve handle mounted thereon and provided with a smooth exterior surface, handle securing couplings provided with openings of different sizes at the ends thereof, the ends of the couplings with the larger openings therein receiving the ends of the said sleeve handle, said couplings provided with shoulders intermediate their ends, the extremities of said sleeve handle abutting against said shoulders.

2. A hand support for cars, platforms and the like, comprising an upright rigid post, spaced couplings mounted on said post, the remote extremities of said couplings provided with openings receiving the post snugly therein, anchoring means extending through the said post, and the remote extremities of said couplings holding the same against motion, the confronting extremities of said couplings provided with enlarged openings and with shoulders defining the bottom wall of said openings, and a sleeve handle, mounted on said post and extending within the confronting enlarged openings of said couplings and abutting against said shoulders, and means preventing the relative rotation of said couplings and said sleeve handle.

3. A hand support for cars comprising a sleeve handle with a vitreous coating thereon, said sleeve handle adapted to receive a cylindrical support therethrough, handle securing members adapted to rigidly engage said cylindrical support, said handle securing members and said sleeve handle provided with interlocking ends.

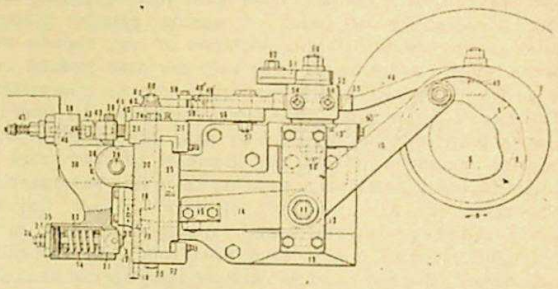
4. An article of the class described comprising a sleeve handle with a vitreous coating thereon and adapted to receive a cylindrical member therethrough, handle securing members adapted to rigidly engage said cylindrical member, said handle securing members receiving the extremities of said sleeve handle therein, and holding the same against movement with respect to said cylindrical member.

5. An article of the class described comprising a sleeve handle with a vitreous coating thereon, said sleeve handle adapted to receive a cylindrical member therethrough, to which said sleeve handle is to be secured, handle securing members provided with enlarged extremities receiving the extremities of said sleeve handle therein, said sleeve handle and handle securing members provided with interlocking extremities holding the two against relative rotation, the ends of said handle securing members projecting above, and spaced away from, the vitreous coating

of said sleeve handle, and means carried by said handle securing members adapted to rigidly lock the same to said first-mentioned cylindrical member.

[Claim 6 not printed in the Gazette.]

1,203,822. NUT-MAKING MACHINE. WILLIAM L. WARD, HERBERT D. REMSEN, and EMILE C. BOERNER, Port Chester, N. Y., assignors to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y., a Corporation of New York. Original application filed June 27, 1910, Serial No. 569,053. Divided and this application filed Apr. 27, 1912. Serial No. 693,604. (Cl. 10—162.)



1. A mechanism of the nature disclosed, comprising an elongated frame member, a jaw-supporting member arranged to slidably reciprocate horizontally on said frame member, a jaw-carrying arm hinged to said jaw-supporting member about an axis in parallelism with the movement of said jaw-supporting member, a lever terminating at one end in a horizontally elongated bearing piece adapted to swing up and down with said lever, a cam in engagement with said bearing piece and said arm whereby the same may be oscillated with the rise and fall of said bearing piece, and means for reciprocating said jaw-supporting member and oscillating said lever at appropriate periods.

2. A mechanism of the nature disclosed, comprising a drive shaft, a face cam arranged on one end thereof, a circumferential cam arranged adjacent said face cam, a lever horizontally oscillated by said circumferential cam, a jaw-carrying member horizontally reciprocated by said lever, a second lever vertically oscillated by said face cam, and means actuated by said second lever to enable a stock bar to be clamped and advanced during a forward reciprocation of said member, said bearing piece engaging said cam throughout the reciprocatory path of said jaw-supporting member.

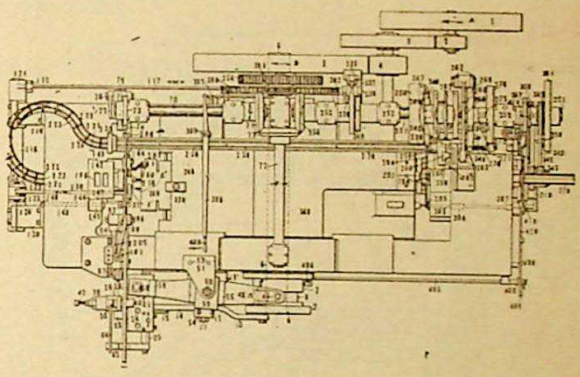
3. A mechanism of the nature disclosed, comprising a member adapted to reciprocate in a horizontal direction, a jaw carried thereby, a second member pivoted to said reciprocating member about an axis parallel with the direction of movement of said reciprocating member, a jaw carried by said second member, a spring-pressed part carried by said second member, a cam mounted to vertically move in said reciprocating member and adapted to actuate said second member through said part to cause said jaws to move into gripping position, a vertically oscillating arm terminating in a horizontally elongated bearing piece having a sliding bearing with said cam, and means for reciprocating said first mentioned member and vertically oscillating said last-mentioned lever.

4. A mechanism of the nature disclosed, comprising a vise mechanism adapted to be reciprocated in a horizontal direction, a power shaft having a circumferential cam, a lever connected at one end to said vise mechanism and at the other end coöperating with said circumferential cam, an intermediate fulcrum bolt, adjustable mountings for said fulcrum bolt, a block having a pivotal relation with said fulcrum bolt, and means for adjustably securing said lever to said block.

5. A mechanism of the nature disclosed, comprising a drive shaft, a circumferential cam thereon, a lever cooperating at one end with said cam, a pivot adjustably secured to said lever at an intermediate point, adjustable bearings for said pivot, an extension piece adjustably secured to the free end of said lever, a vise mechanism adapted to be reciprocated, and an adjustable bearing connecting said vise mechanism with said extension whereby the former may be actuated by the latter.

[Claims 6 to 22 not printed in the Gazette.]

1,203,823. NUT-MAKING MACHINE. WILLIAM L. WARD, HERBERT D. REMSEN, and EMILE C. BOERNER, Port Chester, N. Y., assignors to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y., a Corporation of New York. Original application filed June 27, 1910, Serial No. 569,053. Divided and this application filed Apr. 27, 1912. Serial No. 693,605. (Cl. 10—72.)



1. A mechanism of the nature disclosed, comprising punching mechanism two members adapted to abut opposite sides of a stock-bar to position the same during the punching operation, pivoted arms supporting said members, and automatic means for simultaneously causing each of said members to approach the other at an established predetermined rate of movement.

2. A mechanism of the nature disclosed, comprising punching mechanism two members adapted to be brought into abutment with the sides of a stock-bar to center the same during the punching operation, arms supporting said members and restricting the direction of movement thereof, cam means coacting with said arms adapted to positively move each of said arms at an established predetermined rate, whereby a corresponding movement will be imparted to said members and means to automatically move said cam relative to said arms.

3. A mechanism of the nature disclosed, comprising punching mechanism, a pair of arms each pivotally secured to a common base, a bar-centering finger carried by each of said arms, an actuating finger carried by each of said arms, a cam coöperating with said actuating fingers adapted to oscillate said arms to move said centering fingers toward one another and thereby center the bar during the punching operation, and means to automatically reciprocate said cam relative to said actuating fingers.

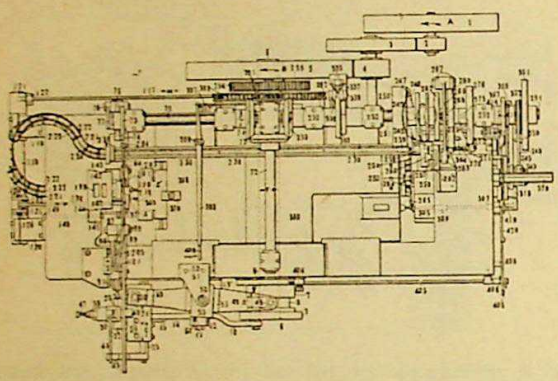
4. A mechanism of the nature disclosed, comprising punching mechanism, a pair of arms, each pivoted at an intermediate point to a common base, a centering finger carried by each arm on the same side of its pivot, said centering fingers terminating opposite to one another, an actuating finger carried by each of said arms on the other side of said pivot and terminating opposite one another, a cam intervening between said actuating finger and movable to simultaneously actuate the same and thereby cause said centering fingers to center the bar during the punching operation, and means to automatically move said cam relative to said actuating fingers.

5. A mechanism of the nature disclosed, comprising punching mechanism, a pair of arms, each pivoted at an intermediate point to a common base, a centering finger carried by each arm on the same side of its pivot, said centering fingers terminating opposite to one another, an actuating finger carried by each of said arms on the other side of said pivot and terminating opposite one an-

other, a cam adapted to reciprocate between said actuating fingers to simultaneously actuate the same and thereby cause said centering fingers to center the bar during the punching operation, and means to automaticallly reciprocate said cam.

[Claims 6 to 23 not printed in the Gazette.]

1,203,824. NUT-MAKING MACHINE. WILLIAM L. WARD, HERBERT D. REMSEN, and EMILE C. BOERNER, Port Chester, N. Y., assignors to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y., a Corporation of New York. Original application filed June 27, 1910, Serial No. 569,053. Divided and this application filed Apr. 27, 1912. Serial No. 693,607. (Cl. 10—72.)



1. A machine of the nature disclosed comprising, in combination, an intermittently rotatable member, nut blank supporting means rotatable with said member and comprising a plurality of pairs of gripper fingers adapted to engage peripheral portions of nut blanks, the members of said pairs being relatively movable toward and from each other, nut blank reshaping means comprising a plurality of pairs of punches and dies mounted to operate on the faces of nut blanks held by said fingers when said supporting means is at rest, the members of said pairs of punches and dies being adapted to have relative movement in a line intersecting the rotary path of movement of said gripper fingers, a reciprocatory head to which said punches are secured, and means adapted to intermittently rotate said first-mentioned member.

2. A machine of the nature disclosed comprising, in combination, an intermittently rotatable member, nut blank supporting means rotatable with said member and comprising a plurality of pairs of spring fingers adapted to engage peripheral portions of nut blanks, the members of said pairs being relatively movable toward and from each other, nut blank reshaping means comprising a plurality of pairs of punches and dies mounted to operate on the faces of nut blanks held by said fingers when said supporting means is at rest, the members of said pairs of punches and dies being adapted to have relative movement in a line intersecting the rotary path of movement of said gripper fingers, a reciprocatory head to which said punches are secured, and means adapted to intermittently rotate said first-mentioned member.

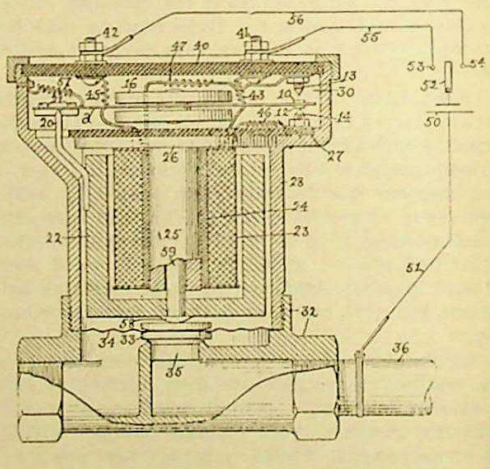
3. A machine of the nature disclosed comprising, in combination, an intermittently rotatable member, nut blank supporting means rotatable with said member and comprising a plurality of pairs of spring fingers adapted to engage peripheral portions of nut blanks, nut blank reshaping means comprising a plurality of pairs of implements mounted to operate on the faces of nut blanks held by said fingers when said supporting means is at rest, the members of said pairs of implements being relatively movable in a line intersecting the rotary path of movement of said fingers, and means adapted to intermittently rotate said first mentioned member.

4. A machine of the nature disclosed comprising, in combination, an intermittently rotatable member mounted to rotate in a vertical plane, nut blank supporting means rotatable with said member and comprising a plurality of pairs of radially extending spring fingers having horizontally extending nicks adapted to engage peripheral portions of nut blanks, nut blank reshaping means comprising a plurality of pairs of implements mounted to operate on the faces of nut blanks held by said fingers when said supporting means is at rest, the members of said pairs of implements being relatively movable in a line intersecting the rotary path of movement of said fingers, and means adapted to intermittently rotate said first mentioned member.

5. A machine of the nature disclosed comprising, in combination, an intermittently rotatable member, nut blank supporting means rotatable with said member and comprising a plurality of pairs of spring gripper fingers adapted to engage peripheral portions of nut blanks, the members of said pairs being relatively movable toward and from each other, nut blank reshaping means comprising a plurality of pairs of implements mounted to operate on the faces of nut blanks held by said fingers when said supporting means is at rest, the members of said pairs of implements being relatively movable in a line intersecting the rotary path of movement of said gripper fingers, means adapted to intermittently rotate said first mentioned member, and means separate from said last-mentioned means adapted to stop each of the intermittent rotary movements of said blank supporting means when in exact blank supporting position relative to said reshaping implements.

[Claims 6 to 19 not printed in the Gazette.]

1,203,825. CIRCUIT-CONTROLLING DEVICE. HENRY E. WARREN, Ashland, Mass. Filed Feb. 12, 1915. Serial No. 7,880. (Cl. 175—21.)



1. In a device of the character described, in combination, an actuator having a movable member, a flexible reed connected at one end with said member and capable of vibrating between contacts at its other end, said reed carrying a mass of considerable inertia tending to hold the contact end of the reed momentarily stationary while the other end is moving.

2. A contact changing device provided with means for utilizing inertia to maintain a contact momentarily until after the termination of motion impressed upon said device and means for moving said device.

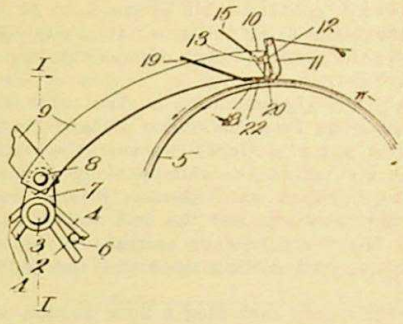
3. In a device of the character described, a bodily movable contact member, a circuit terminal with which one end of said member coöperates, means coöperating with the opposite end of said member for effecting bodily movement of the latter, and a weight carried by said member between its ends to retard the movement of the free end of said member.

4. In a device of the character described, a bodily movable contact member, a circuit terminal with which one end of said member coöperates, an electro-magnet provided with an armature, a magnetizable member movable

by said electromagnet into proximity to said armature to establish a magnetic circuit through said member, means for connecting said movable contact member with the movable magnetizable member, and a weight carried by the movable contact member between its ends.

5. A contact changing device provided with means for utilizing inertia to maintain a contact momentarily between one end of said device and a coöperating contact member until after the termination of motion impressed upon the other end of said contact changing device, and means for moving said contact changing device.

1,203,826. GLASS-CYLINDER-CAPPING APPARATUS. WILLIAM WESTBURY, Okmulgee, Okla. Filed Sept. 20, 1915. Serial No. 51,737. (Cl. 49—50.)

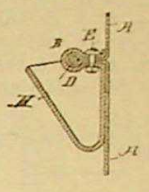


1. In a glass cylinder capping apparatus, a support for a cylinder, an arm for disposition close to the opposite side of the cylinder from said support, a conductor carried by the arm and adapted for holding a wire against said cylinder, a guide pivoted on said arm so that one of its ends may be disposed in proximity to the point where said conductor holds the wire against said cylinder, and a plurality of guide sheaves carried by the pivoted guide and adapted to receive said wire to facilitate the tightening of the wire around the cylinder by applying a pull thereon.

2. In a glass cylinder capping apparatus, a suitable frame, inverted-arch arms secured at corresponding ends to the frame and projecting laterally therefrom to form a horizontal support for a glass cylinder, a pivoted arm projecting laterally from the frame and adapted at its free end to overlie the cylinder, a conductor plate secured to and projecting from said arm and adapted to rest upon the cylinder, and provided with an eye adjacent the latter, an insulation plate on said conductor plate, a guide pivoted to said arm and adapted to abut at its lower end against said insulation plate, a plurality of guide sheaves mounted in said arm, one of said guide sheaves being located at the end of the guide which abuts said plate, electric current feed wires connected respectively to said conductor plate and said guide, and a wire for encompassing the cylinder and extending at one end through the eye of said conductor plate and secured at such end to the latter, and extending at the other end slidingly over said sheaves; said wire extending over the sheave adjacent the conductor plate, at the side of said sheave in proximity to the eye of the conductor plate.

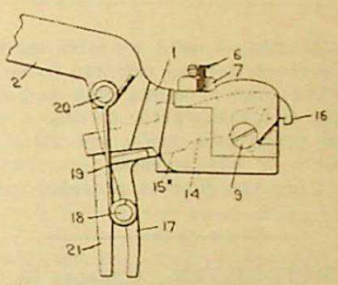
3. In a glass cylinder capping apparatus, a support for a cylinder, comprising standards, a horizontal bar mounted on said standards, laterally projecting inverted-arch arms secured at corresponding ends to said bar, means cooperating with said arms and the standards for preventing downward movement of the former, lugs projecting rigidly upward from said bar, a rod slidingly mounted in said lugs, laterally projecting arms pivoted on said rod and projecting laterally therefrom to move in vertical planes to permit a glass cylinder to be placed on said first-named arms, and to overhang said glass cylinder, and means mounted on and at the outer end of each of said pivoted arms for holding a wire encompassing said cylinder.

1,203,827. ENDLESS CONVEYER-BELT. CARL T. WESTLIN, Arlington, N. J. Filed Mar. 12, 1914. Serial No. 824,138. (Cl. 193—8.)



A conveyer belt having its body formed into a loop, a sheathing embracing said loop and rigidly secured thereto, one edge of said sheathing extending into the direction of lead of the belt, reinforcing the belt and formed into a carrier device.

1,203,828. THREAD-CUTTING TEMPLE FOR LOOMS. WILLIAM R. WIDDUP, Spartanburg, S. C., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 21, 1915. Serial No. 46,645. (Cl. 139—36.)



1. A temple-head provided with a toothed roll and having a plurality of stationary blades one of which lies closely adjacent to the end of said temple roll, and forms a guide for the edge of the selvage of the cloth, a cooperating movable cutter having a plurality of cutter blades alternating with said stationary blades and means for actuating said movable cutter whereby certain of the movable blades will pass between said stationary blades in coöperation with the adjacent edges of the successive stationary blades.

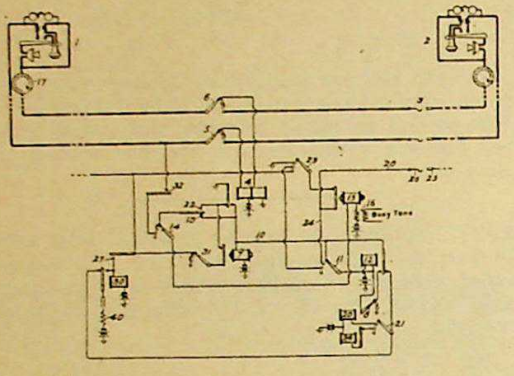
2. A temple-head provided with a toothed roll and having a transverse slot at its outer end, a plurality of stationary cutters fixedly secured in said slot, one of said cutters being closely adjacent to the end of said toothed roll, and forming a guide for the edge of the selvage of the cloth, an oscillating and reciprocating cutter having a plurality of hooked blades disposed in alternating relation to said stationary blades, the edges of said movable blades coöperating with adjacent edges of said stationary blades and means for actuating said movable cutter.

1,203,829. TELEPHONE-EXCHANGE SYSTEM. SAMUEL B. WILLIAMS, Jr., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 13, 1915. Serial No. 50,370. (Cl. 179—18.)

1. In a telephone exchange system, incoming lines and groups of outgoing lines, a selector switch for interconnecting the same, an electromagnet for operating said switch to select a group of outgoing lines, automatic means operative thereupon for controlling said switch to select an idle outgoing line in the selected group, electromagnetic means for extending a calling line to said selector switch, a circuit extending over the selected outgoing lines for operating said electromagnetic means, a relay controlling said circuit, and means for actuating said relay if all the lines in the selected group of outgoing lines are busy.

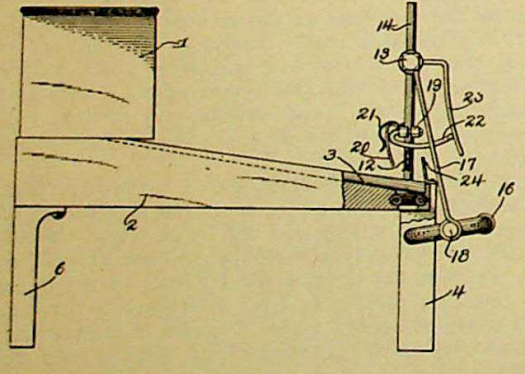
2. In a telephone exchange system, a selector switch having a set of movable and sets of stationary contacts

arranged in rows, outgoing lines terminating in said stationary contacts, an electromagnet controllable over a calling line for actuating said movable contacts to select a row of stationary contacts, automatic means operative thereupon for causing said movable contacts to select an idle set in said row of stationary contacts, electromagnetic means for extending a calling line to said movable contacts, a circuit for said electromagnetic means ex-



tending through one of said movable contacts engaging a stationary contact, a relay adapted to be actuated by a circuit extending over a calling line and controlling the circuit of said electromagnetic means, a contact in the circuit of said relay, and means operative if all the stationary contacts of the selected row have been found busy for actuating the contact provided in the circuit of said relay.

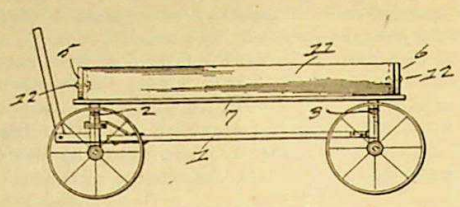
1,203,830. FRUIT-PITTER. CHARLES H. WILSON, Glens Falls, N. Y. Filed Feb. 26, 1916. Serial No. 80,603. (Cl. 146—5.)



1. In a device of the character described, an operating chamber having an opening in the bottom, means for delivering fruit to the chamber, a reciprocating pitter rod mounted centrally thereover, a continuous coil spring forming a flexible self-adjusting seat therein, the end of the rod being hollow, expanded and serrated to cut the fruit and engage the pit upon the downward stroke and retain the fruit upon the rod upon the upward stroke, means to clear the rod of the fruit, and means to reciprocate the rod.

2. In a device of the character described, an operating chamber having an opening in the bottom, means for delivering fruit into the chamber, a reciprocating pitter rod mounted centrally thereover, a self-adjusting seat therein, means to reciprocate the rod therethrough, and a spring-pressed ejector pivoted to the rear of the pitter rod, and an arm extending from the ejector, a guide coacting therewith and operated by the reciprocating means of the pitter rod to hold the ejector out of the path of the rod during the downward stroke and bring the ejector thereunder as the rod approaches the upper end of the stroke.

1,203,831. CONVERTIBLE BOX AND COASTER BODY FOR VEHICLES. JOHN H. WITTMAN, Toledo, Ohio. Filed Jan. 6, 1913. Serial No. 740,440. (Cl. 21—183.)



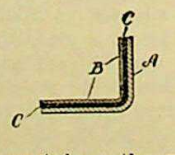
1. A vehicle body having a floor divided longitudinally to present a fixed section and movable sections arranged at opposite sides of the fixed section, all of said sections being normally disposed in the same plane to provide a floor, and connections between the movable sections and body to permit said movable sections to be swung into position above the fixed section of the body, said movable sections in said position being disposed in the same plane and in edge contact.

2. A vehicle body including a floor, side sections and end sections, the floor including a fixed central section and movable outer sections, the movable sections of the floor being secured to the side sections of the body, and connections between said connected side sections and movable floor sections and the end sections of the body to permit the movable floor sections to be swung to a position above and resting upon the end sections of the body.

3. A vehicle body including a floor section and movable sides, parts of the floor section being fixed to and movable with the sides, and connections to permit the sides and movable parts of the floor section to be swung bodily to position the movable parts of the floor section in a plane above and substantially parallel to their normal positions.

4. A vehicle body including a floor section made up of a fixed part and movable parts, end walls for the body secured to the fixed part of the floor section, and side walls for the body pivotally connected to the end walls and fixedly secured to the movable parts of the floor section, the pivotal connection permitting the side walls and movable parts of the floor section to be swung to position the said movable parts of the floor section above and substantially parallel with the fixed part of the floor section.

1,203,832. COFFEE-CONTAINER. FREDERICK P. WOOD, Detroit, Mich., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 13, 1914. Serial No. 818,488. (Cl. 229—14.)



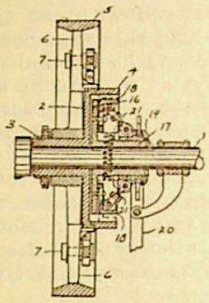
A paper walled container the walls of which consist of an exterior layer of paper; an interior layer of hydrolyzed fiber; and an intermediate layer of fused cement adhering to and uniting said exterior and interior layers; said fused cement and hydrolyzed fiber coöperating to prevent the absorption of aromatic oils and thereby to preserve the flavor and prevent the deterioration of the contents of said container.

1,203,833. POWER-GOVERNOR AND CLUTCH. WILLARD A. WOODWARD, Fairbanks, Wash. Filed June 8, 1914. Serial No. 843,688. (Cl. 74—45.)

1. The combination of a power shaft, a disk and a drive wheel revolubly mounted on the shaft, automatic means to apply the power from the drive wheel to the disk, and manually controlled means to apply and release the power from the disk to and from the shaft.

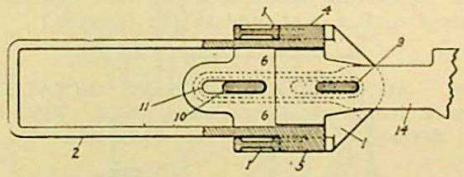
2. The combination of a power shaft, a disk provided with a flange revolubly mounted on the shaft by a cylin-

drical sleeve, a power wheel revolubly mounted upon the sleeve of the disk, centrifugal means to apply the power from the wheel to the disk, and manual means to apply the power from the flange to the shaft.



3. The combination of a power shaft, a drive wheel and a disk provided with a flange revolubly mounted on the shaft, automatic means to apply the power from the wheel to the disk, and means to apply the power from the disk to the shaft, consisting of a gland solidly attached to the shaft, blocks slidably attached to the gland having convex faces adapted to bear upon the inner face of the flange, a sleeve slidably mounted upon the shaft, bars pivoted at each end connecting the sleeve with the blocks, and manual means to slide the sleeve and move the blocks into and out of contact with the flange.

1,203,834. DRAFT-YOKE. IRA ORVILLE WRIGHT, Baltimore, Md. Filed Dec. 19, 1912. Serial No. 737,621. (Cl. 213—42.)



1. In a device of the class described, a draw-bar and a yoke strap, a hollow head embracing both elements and provided with an extending fork, and means penetrating said fork and adapted to unite the parts of the device together.

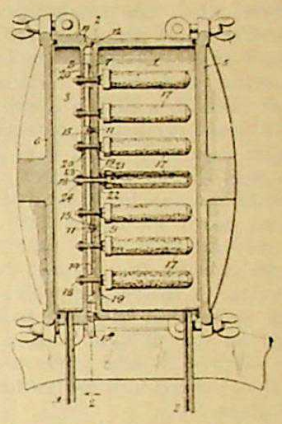
2. A yoke for draft gears consisting of a jaw member and a loop, the jaw member having a horizontal aperture to receive the front key and a second horizontal aperture to receive a rear or intermediate key.

3. In combination in a draft rigging for cars, a vertical yoke having pivot members at the front ends and a hollow jaw member through which the arms of the yoke extend, the jaw member being adapted to receive the end of the M. C. B. draw bar and having sockets for the pivots of the yoke, slots in alinement with the slot in the draw bar and elongated slots in the rear of said first mentioned slots.

1,203,835. FILTER. EDWARD ZAHM, Buffalo, N. Y., assignor to Zahm Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed Mar. 31, 1913, Serial No. 757,783. Renewed Apr. 13, 1916. Serial No. 90,980. (Cl. 210—11.)

1. A filter comprising an inlet chamber, an outlet chamber, said chambers having walls provided with openings and separated by a space which is independent of the interior of said chambers, and a filter tube arranged in one of said chambers and secured in said openings and the joints between said filter tube and said walls extending into the space between said walls.

2. A filter comprising an inlet chamber having an inner wall, an outlet chamber having an inner wall, said inner walls being provided with openings and the space between said inner walls communicating only with the space exterior of said chambers, a filter tube arranged in said inlet chamber and having a threaded neck extending through corresponding openings in said inner walls and having a shoulder engaging the inner side of the inner wall of said inlet chamber and the joints between said filter tube neck and said inner walls extending into the space between said inner walls, and a clamping nut arranged on said neck and engaging with the inner side of the inner walls of said outlet chamber.



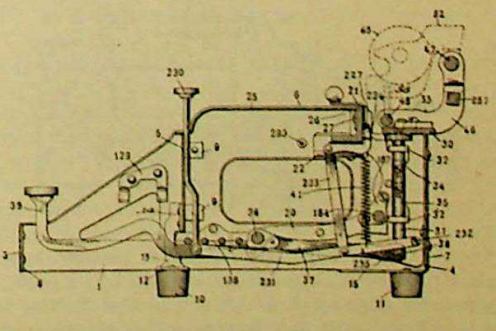
3. A filter comprising an inlet chamber having an inner wall, an outlet chamber having an inner wall, said inner walls being provided with openings, a leak chamber arranged between said inner walls and non-communicating with the exterior of said chambers, and a filter tube arranged in the inlet chamber and having a neck secured in corresponding openings of said inner walls, the joints between said neck and inner walls extending into said leak chamber.

4. A filter comprising an inlet chamber having an inner wall, an outlet chamber having an inner wall, said inner walls being provided with openings, a marginal flange arranged on one of said chambers and engaging with the other of said chambers and forming between them a leak chamber which communicates only with the exterior of said inlet and outlet chambers, and a filter tube arranged in said inlet chamber and having a neck secured in corresponding openings in said inner walls, the joints between said neck and inner walls extending into said leak chamber.

5. A filter comprising an inlet chamber having an inner wall, an outlet chamber having an inner wall, said inner walls being provided with openings, a marginal flange arranged on one of said chambers and engaging with the other of said chambers and forming between them a leak chamber which communicates with the exterior of the filter, stiffening ribs arranged on the other side of one of said inner walls and provided with spacing bosses engaging with the outer side of the other inner wall, and a filter tube arranged in said inlet chamber and having a neck secured in corresponding openings in said inner walls.

[Claim 6 not printed in the Gazette.]

1,203,836. TYPE-WRITING MACHINE. JESSE ALEXANDER, New York, N. Y. Filed May 22, 1912, Serial No. 698,879. Renewed Oct. 22, 1915. Serial No. 57,382. (Cl. 197—73.)



1. In a typewriter, shift key locking mechanism, comprising a pivoted key lever having a finger piece, a lock-

ing lever provided with a rearward extension pivoted to said key lever and having a finger piece adjacent to and overlying the finger piece of the key lever whereby to be operated by the same finger which is used to operate the key lever, a spring normally holding the finger piece of the locking lever in a raised position and a stationary stop adapted to be engaged by the rearward extension of said locking lever when the finger-piece of the locking lever is depressed to carry the rearward extension of the lever forward to a position beneath the stop.

2. In a typewriter, a frame, a vertically movable base plate at the rear thereof, a platen construction carried by said base plate and vertically movable therewith, an escapement rocker carried by said base plate, a universal bar mounted in said frame, said rocker and said universal bar having a sliding connection permitting said rocker to be moved up and down with said base plate and means for vertically moving said base plate, the escapement rocker and platen construction up and down.

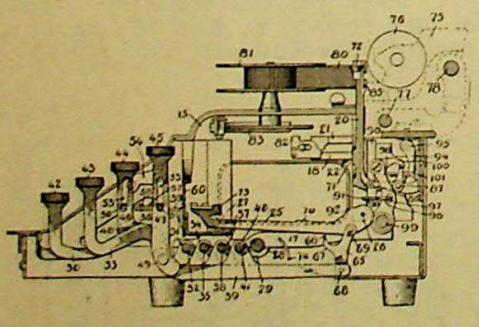
3. In a typewriter, a frame, a movable base plate, guide rods detachably supported by said base plate, a guide slidably engaged on one of said rods, a platen construction detachably secured to said guide and having a roller supported on the other rod and means for raising and lowering said base plate.

4. In a typewriter, carriage shift key locking mechanism, comprising a key lever having a finger piece, a locking lever pivoted at a point intermediate its length to said key lever and having a part extending forwardly and upwardly from the pivotal support terminating in a finger piece adjacent to and overlying the top of the finger piece of the key lever to be thereby operated by the same finger which operates the finger-piece of the key lever, said locking lever having a part extending rearwardly and upwardly from the pivotal support, a spring normally holding the finger piece of the locking lever in a raised position, and a stop adapted to be engaged by the rearwardly extending part of said locking lever.

5. In a typewriter, the combination of a main supporting frame, brackets mounted in the interior of said frame, a base plate, a platen construction carried by said base plate and transversely movable relatively thereto, lifting plungers vertically guided in said brackets for raising and lowering said base plate and platen construction and a platen shifting key pivotally carried by one of said brackets and operatively connected with one of said plungers whereby a constant alinement and relation is maintained between said platen shifting key and said vertically movable plunger within said frame.

[Claims 6 to 12 not printed in the Gazette.]

1,203,837. TYPE-WRITING-MACHINE KEY AND TYPE-BAR ACTION. JESSE ALEXANDER, New York, N. Y. Original application filed May 22, 1912, Serial No. 698,879; renewed Mar. 18, 1915, Serial No. 15,388; again renewed Oct. 22, 1915, Serial No. 57,382. Divided and this application filed Mar. 20, 1915. Serial No. 15,756. (Cl. 197—28.)



1. In a key and type bar action, a pivoted type bar, a key lever pivoted at a point intermediate its ends, a push link pivotally connected at its lower end to the rear end of the key lever, said link having a lost-motion connection at its upper end with the type bar at a point forward of the pivot thereof and a temporary connection with said type bar at a point forward of said lost-motion connection at commencement of the printing stroke.

2. In a key and type bar action, a pivoted type bar, a pivoted key lever, a link pivotally connected with said key lever at its lower end and having a lost-motion connection at its upper end with the type bar at a point forward of the pivot of said type bar and a shoulder on the link in front of said lost-motion connection engaging the type bar at a point forward of the lost-motion connection for starting the type bar on its printing stroke.

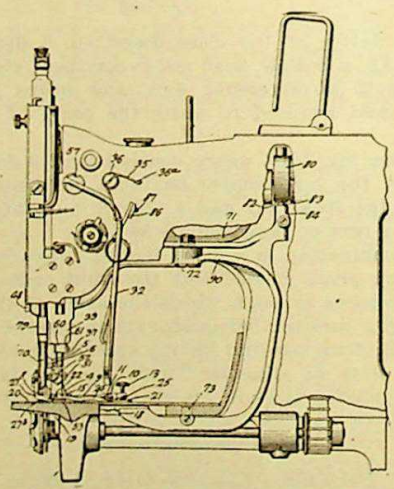
3. A key and type bar action comprising a pivoted lever, a finger key connected to the forward end of said lever, a pivoted type bar, a link pivotally connected to the rear end of said lever and having a pin and slot connection with said type bar below and in front of its pivot, and having a shoulder below and in front of said pin and slot connection for engaging said type bar to start its movement.

4. In a typewriter, a main supporting frame, brackets secured to the inner sides of the side members of said frame having inwardly extending lugs at the upper rearward portions thereof and shaft supporting portions forward thereof, a type bar segment supported on said inwardly extending lugs at the upper portions of said brackets, type bars pivoted in said segment, shafts supported between the forward shaft supporting portions of the brackets, key levers pivotally supported by said shafts and links connecting said key levers and the type bars.

5. Key and type bar mechanism, comprising four parallel shafts, two banks of key levers pivotally supported by two of said shafts, two sets of levers pivotally supported by the other two of said shafts, vertically movable keys pivotally connected to said two sets of levers, guide rods for said vertically movable keys, pivoted type bars and links connecting said levers and said type bars.

[Claims 6 to 9 not printed in the Gazette.]

1,203,838. SHOE-SEWING-MACHINE ATTACHMENT. EDWIN N. ANDREWS, Fort Dodge, Iowa. Filed Dec. 8, 1914. Serial No. 876,073. (Cl. 112—24.)



1. In a device of the class described, eccentrically driven vertically actuated reciprocating means, a horizontally movable folding finger linked to the aforesaid means, means for adjusting same, and horizontally reciprocating means coöperating with the folding finger to fold and feed the material operatively connected and synchronously movable therewith.

2. In combination with stitch-forming mechanism, vertically reciprocating tape-guiding and presser foot means, alternately reciprocating presser foot means, means operatively connected with the aforesaid elements for feeding along material operated on, and means for adjusting said elements, substantially as set forth and for the purposes described in the foregoing specification.

3. In combination with stitch-forming mechanism vertically reciprocating tape folding and guiding means, reciprocating means operating in conjunction therewith to

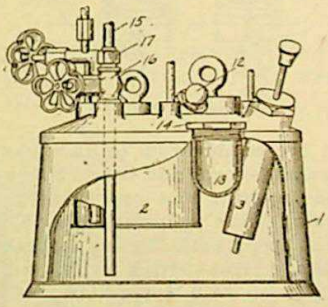
feed along material operated on, reciprocating folding means moving in unison with the feeding means, and means for adjusting same.

4. In combination with stitch-forming mechanism, edge slitting means located in advance of and operatively connected with folding mechanism, vertically reciprocating tape folding and guiding means, means for feeding the material operated on, horizontally reciprocating folding means operating in conjunction with the feeding means, means for guiding the edge of the material and starting the fold, and means operatively connected with the aforesaid mechanism for slitting the edge of the material in advance of the folding operation.

5. In combination with stitch-forming mechanism, slitting means for cutting spaced slits in the edge of the material operated on located in advance and operatively connected with folding means, adjustable tape folding and guiding means, adjustable means for feeding material operated on, said means including alternating presser foot means, edge folding means operating in conjunction with the feeding means, resiliently pressed adjusting means, edge guiding means for guiding the edge of the material operated on and starting the fold, and means operatively connected with the aforesaid mechanism for cutting spaced slits in the edge of the material operated on for the purposes described.

[Claims 6 to 10 not printed in the Gazette.]

1,203,839. PLUMBER'S FURNACE. ARTHUR J. ARCHAMBAULT, Chicago, Ill. Filed Feb. 11, 1915. Serial No. 7,499. (Cl. 158—32.)



1. In a plumber's furnace, a main reservoir, an auxiliary reservoir arranged within the main reservoir, means for introducing air under pressure into one of said reservoirs, and a check valve for permitting air to flow from the latter reservoir to the other and preventing a back flow of air or liquid, said check valve including a spring tending constantly to close the same.

2. In a plumber's furnace, a main reservoir forming the base of the furnace, an auxiliary reservoir arranged in the top of the main reservoir, a small cup-shaped chamber projecting down into the main reservoir from the top thereof, and a plug for closing the top of the said chamber.

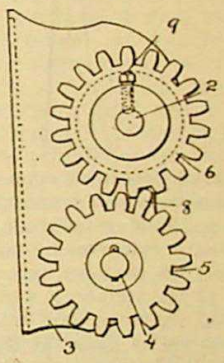
3. In a plumber's furnace, a main reservoir closed at the top, an auxiliary reservoir lying within the main reservoir and having its upper end closed by the top of the latter, there being a passage formed in the top wall of the main reservoir leading from a point within the auxiliary reservoir to a point in the main reservoir exterior to the auxiliary reservoir, and a valve in said passage.

4. In a plumber's furnace, a main reservoir closed at the top, an auxiliary reservoir lying within the main reservoir and having its upper end closed by the top of the latter, there being a passage formed in the top wall of the main reservoir leading from a point within the auxiliary reservoir to a point in the main reservoir exterior to the auxiliary reservoir, a valve in said passage, said passage having a portion opening out to atmosphere, and a detachable plug in said portion.

5. In a plumber's furnace, a main reservoir closed at the top, an auxiliary reservoir lying within the main reservoir and having its upper end closed by the latter, there being a passage formed in the top wall of the main reservoir leading from a point within the auxiliary reservoir to a point in the main reservoir exterior to the auxiliary reservoir, said passage having a branch opening out through atmosphere, a detachable tubular member arranged within said passage and removable through said branch, a valve arranged in said tubular member, and a detachable plug for closing the outer end of said branch.

[Claims 6 and 7 not printed in the Gazette.]

1,203,840. MEANS FOR ARRESTING THE UNWINDING OF AWNINGS AND SHADES. FRANK BAILEY, Muskegon, Mich. Filed Dec. 14, 1915. Serial No. 66,813. (Cl. 74—13.)



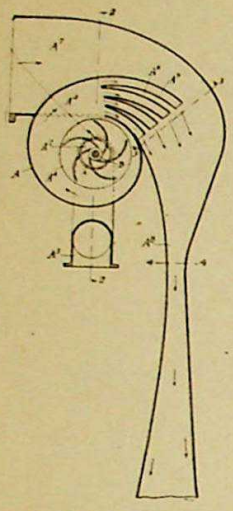
1. Means for arresting the unwinding of awnings, and shades having a spring roller, consisting of a gear wheel fast upon the spring roller, a loose gear wheel in mesh therewith, and coöperating means the elements of which are carried by and movable with the respective gear wheels whereby the rotation thereof will be stopped when the awning has been unwound to a predetermined extent.

2. Means for arresting the unwinding of awnings, and shades having a spring roller, consisting of a gear wheel fast upon the spring roller, a loose gear wheel in mesh therewith, one of the gear wheels having a long tooth and more teeth than the other gear wheel, said other gear wheel having a shallow space between two of its teeth, the gear wheels being spaced apart and said long tooth meshing properly with the teeth of the other gear for a certain number of revolutions of the gears, and upon the last revolution of the gears engaging and binding in said shallow space, to stop further movement of the gears and of the roller.

3. Means for arresting the unwinding of awnings, and shades having a spring roller, consisting of a gear wheel rotatably adjustable upon a pivot of the spring roller and having a set screw engaging said pivot for fast connection therewith, a loose gear wheel in mesh with said first-named gear wheel, and coöperating means the elements of which are carried by and movable with the respective gear wheels whereby the rotation thereof will be stopped when the awning has been unwound to a predetermined extent.

4. Means for arresting the unwinding of awnings, and shades having a spring roller, consisting of a gear wheel rotatably adjustable upon a pivot of the spring roller and having a set screw engaging said pivot for fast connection therewith, a loose gear wheel in mesh with said first-named gear wheel, one of the gears having a long tooth and more teeth than the other gear, said other gear having a shallow space between two of its teeth, the gears being spaced apart and said long tooth meshing properly with the teeth of the other gear for a certain number of revolutions of the gears, and upon the last revolution of the gears engaging and binding in said shallow space, to stop further movement of the gears and of the roller.

1,203,841. CENTRIFUGAL AIR-PUMP. PAUL A. BANCEL, New York, N. Y. Filed Sept. 10, 1913. Serial No. 789,020. (Cl. 230—14.)



1. A pump of the kind described comprising in combination a cylindrical liquid impeller, a casing formed with an impeller chamber, a liquid supply connection thereto, a gaseous fluid chamber, a compressing nozzle outlet from the latter and a collecting chamber into which said impeller chamber opens at its periphery and having an outlet to said gaseous fluid chamber, said collecting chamber and its outlet being shaped ta pass the liquid leaving the impeller chamber and discharged into said gaseous fluid chamber with but small change in velocity.

2. A pump of the kind described comprising in combination a cylindrical liquid impeller, a casing formed with an impeller chamber, a liquid supply connection thereto, a gaseous fluid chamber, a compressing nozzle outlet from the latter, a collecting chamber into which said impeller chamber opens at its periphery and having an outlet to said gaseous fluid chamber, said collecting chamber and its outlet being shaped to pass the liquid leaving the impeller chamber and discharged into said gaseous fluid chamber with but small change in velocity and means in said outlet for dividing the stream of liquid entering said gaseous fluid chamber to increase the surface area of the liquid.

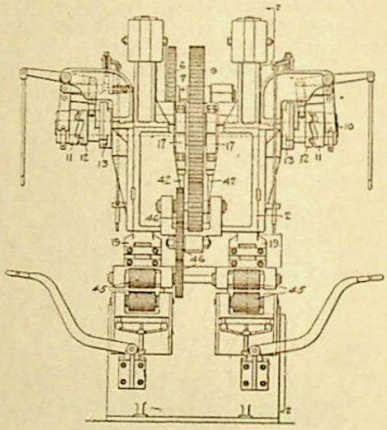
3. A pump of the kind described comprising in combination a cylindrical liquid impeller, a casing formed with an impeller chamber, a liquid supply connection thereto, a gaseous fluid chamber, a compressing nozzle outlet from the latter, a collecting chamber into which said impeller chamber opens at its periphery and having an outlet to said gaseous fluid chamber, said collecting chamber and its outlet being shaped to pass the liquid leaving the impeller chamber and discharged into said gaseous fluid chamber with but small change in velocity and means located in said outlet for dividing the stream of water entering said gaseous fluid chamber into a plurality of parallel jets or streams to increase the surface area of the liquid.

4. A pump of the kind described comprising in combination, a centrifugal liquid impeller, a casing formed with an impeller chamber, a liquid supply connection thereto, a collecting chamber into which said impeller chamber opens at its periphery and shaped to pass the liquid entering it with but small conversion of velocity into pressure, a gaseous fluid chamber into which the liquid is discharged from said collecting chamber, a compressing nozzle outlet from the latter, and means for dividing the stream of water entering said gaseous fluid chamber into a plurality of parallel sheets or streams to increase the surface area of the liquid, said means consisting of spaced apart hollow wedge shaped baffles located in the discharge end of said collecting chamber with the hollow space in each baffle open at its side edges and front edge to said gaseous fluid chamber.

5. A pump of the kind described comprising in combination, a centrifugal liquid impeller, a casing formed with an impeller chamber, a liquid supply connection thereto, a collecting chamber into which said impeller chamber opens at its periphery and shaped to pass the liquid entering it with but small conversion of velocity into pressure, a gaseous fluid chamber into which the liquid is discharged from said collecting chamber and a compressing nozzle outlet from the latter, the axis of said nozzle being inclined to the direction of movement of the liquid entering said gaseous fluid chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,203,842. CLIPPING-SHEARS. FLORENCE C. BIGGERT, Jr., Crafton, Pa., assignor to United Engineering & Foundry Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 30, 1914. Serial No. 874,742. (Cl. 164—49.)



1. In shears, the combination of an upper knife and a lower knife having diagonal and cross-cutting edges, means for raising and lowering the upper knife, an auxiliary lower cross-cutting knife coöperating with the cross-cutting edge of said upper knife, means for raising and lowering said auxiliary cross-cutting knife, and an auxiliary cross-cutting knife on said upper-knife coöperating with the cross-cutting edge of the lower knife.

2. In shears, the combination of upper and lower knives having diagonal-cutting edges and cross-cutting edges, means for raising and lowering the upper knife, a lower auxiliary cross-cutting knife, means for raising said auxiliary cross-cutting knife when the upper knife has completed its diagonal cut, whereby the lower auxiliary cross-cutting knife coöperates with the cross-cutting edge of the upper knife, means for lowering said lower auxiliary cross-cutting knife after the completion of the cut, and an upper auxiliary cross-cutting knife with its cutting edge above the cutting edges of said upper knife, and co-operating with the cross-cutting edge of the lower knife to complete the cross-cut.

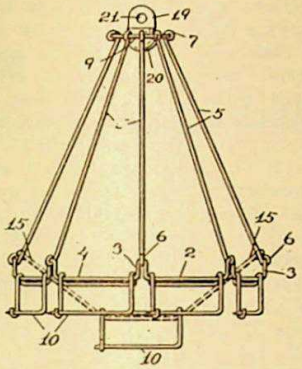
3. In shears, the combination of an upper and lower knife having diagonal cutting edges and cross-cutting edges, a former on the lower knife, the upper knife having a recess conforming with the shape of said former, and knives coöperating with the cross-cutting edges of said upper and lower knives, whereby the cross-cut is made completely across the skelp or other object.

4. In shears, the combination of upper and lower knives having diagonal cutting edges and straight cross-cutting edges, and auxiliary cross-cutting knives coöperating with said upper and lower knives, whereby the cross cut is made completely across the skelp.

5. In shears, the combination of upper and lower knives, having diagonal and cross-cutting edges, an eccentric, connections between said eccentric and the upper knife, the lower auxiliary knife having a cross-cutting edge co-operating with the cross-cutting edge of the upper knife, an eccentric, connections between said eccentric and said

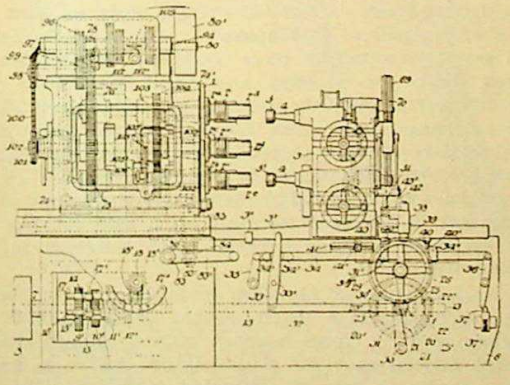
auxiliary knife, and an upper auxiliary knife having a cross-cutting edge coöperating with the cross-cutting edge of the lower knife.

1,203,843. BAG-HOLDER. WALTER R. BOLIN, Brazil, Ind. Filed Apr. 22, 1916. Serial No. 92,922. (Cl. 211—2.)



In a bag holder, a wire ring having upwardly bent loops and substantially straight portions between said loops, upwardly converging wire supports having lower eyes engaging said loops and having upper eyes, an upper ring having perforations engaged by said upper eyes, a suspension device engaging said upper ring, and an auxiliary holder having upwardly diverging arms provided with end eyes engaging the supports at opposite sides of the holder and a lower straight portion, and removable bag-carrying pins engaging the straight portions of said ring and of said auxiliary holder.

1,203,844. GRINDING-MACHINE. CLEMENT BOOTH, Narberth, and ALFRED CHARLES PAGE, Philadelphia, Pa. Filed June 17, 1915. Serial No. 34,602. (Cl. 51—4.)



1. In a grinding machine, a revoluble turret, a plurality of work holding spindles journaled in said turret, mechanisms for revolving said spindles, and means for disengaging mechanism for revolving the respective spindles, whereby they are shown out of action, in combination with a reciprocating device, a plurality of spindles journaled in said device, and tools carried by said spindles second named for operating on work carried by said spindles first named.

2. In a grinding machine, a revoluble turret, a plurality of work holding spindles journaled in said turret, mechanisms for revolving said spindles, and means controlled by said turret for disengaging in succession the mechanisms for revolving the respective spindles, in combination with a reciprocating carriage, spindles journaled in said carriage, and grinding wheels carried by said spindles second named for operating on work carried by said spindles first named.

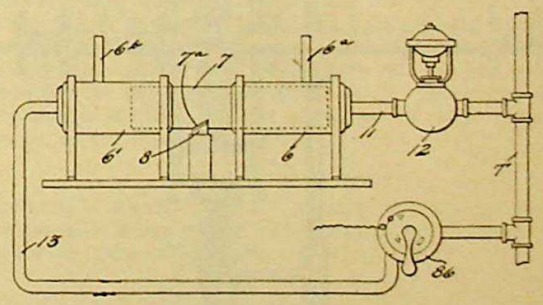
3. In a grinding machine, a revoluble turret, a plurality of work holding spindles journaled in said turret, mechanisms comprising clutches for revolving said spindles and means for disengaging the respective clutches in succession by the intermittent revolution of said turret, in combination with a reciprocating carriage, spindles journaled in said carriage, grinding wheels carried by said spindles second named for acting upon work revolved by said spindles first named, and means for automatically reciprocating said carriage.

4. In a grinding machine, a revoluble turret, mechanism for revolving said turret, mechanism for automatically stopping said turret in predetermined positions, a plurality of work holding spindles journaled in said turret, mechanisms for revolving said spindles, and means for disengaging the mechanisms for revolving the respective spindles in predetermined positions thereof, in combination with a reciprocating carriage, spindles journaled in said carriage, and grinding wheels carried by said spindles second named for operating on work carried by said spindles first named.

5. In a grinding machine, a revoluble turret, mechanism for revolving said turret, mechanism for locking said turret in predetermined positions, a plurality of work holding spindles journaled in said turret, mechanisms for revolving said spindles, and means for disengaging the mechanisms for revolving the respective spindles in succession in predetermined positions thereof, in combination with a reciprocating carriage, spindles journaled in said carriage, means whereby said spindles last named are adapted to be reciprocated transversely to the direction of reciprocation of said carriage, and grinding wheels carried by said spindles last named for operating on work revolved by said spindles first named.

[Claims 6 to 35 not printed in the Gazette.]

1,203,845. AUTOMATIC TRAIN-STOP. CARL H. BUHL, Cleveland, Ohio. Filed Oct. 27, 1913, Serial No. 797,512. Renewed Mar. 13, 1916. Serial No. 83,965. (Cl. 188—4.)



1. In an automatic brake mechanism, the combination of a train pipe, a cylinder connected to the train pipe, said cylinder having a vent to release the train pipe pressure, a piston in said cylinder, adapted to move and uncover said vent in consequence of said pressure, a lock for said piston, adapted when engaged therewith to prevent movement of the piston, and when released therefrom to permit movement thereof, and pressure actuated means connected to the train pipe, and including a valve, to return said piston to normal position.

2. In an automatic brake mechanism, the combination of a train pipe, a cylinder connected to the train pipe, said cylinder having a vent to release the train pipe pressure, a piston in said cylinder, adapted to normally cover said vent, and movable by said pressure to uncover the same, and an electrically controlled lock having a member engageable with said piston to prevent such movement thereof and adapted when released to permit said movement, and pressure actuated means to return said piston to normal position.

3. In an automatic brake mechanism, the combination of a train pipe, cylinders arranged with their axes in line with each other, each of which has a vent and each of which has a connection to the train pipe, a piston working at opposite ends in said cylinders respectively and adapted to cover and uncover the vents therein, a restoring valve in one of said connections adapted to admit train pipe pressure to one of said cylinders to shift the

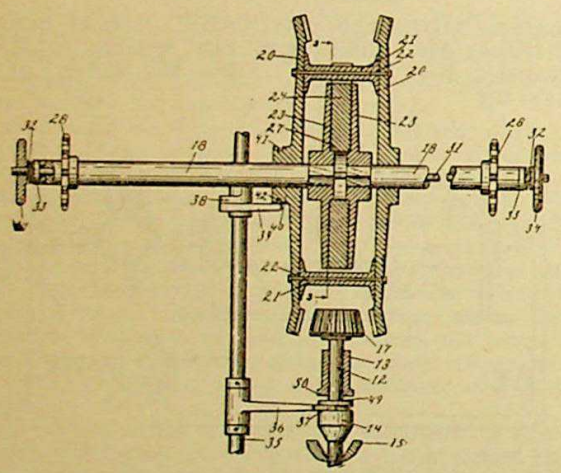
piston in one direction, and an electrically controlled lock having a member engageable with the piston to normally prevent movement thereof in the other direction.

4. In an automatic brake mechanism, the combination of a train pipe, a cylinder provided with a vent and connected to said train pipe to receive pressure therefrom, a reducing valve governing the pressure admitted to said cylinder a piston in said cylinder adapted to cover and uncover the vent, an electrically controlled lock normally holding said piston in position to cover said vent, and train-pipe-pressure actuated means, including a valve, to return said piston to normal position after it is moved to uncover said vent.

5. In an automatic brake mechanism, the combination of a train pipe, a valve for releasing the train pipe pressure and connected to the train pipe, a lock controlling said valve and normally holding the same in closed position, means including an electromagnet to hold said lock engaged when the magnet is energized and to release said lock when the magnet is deënergized, means for energizing and deënergizing said magnet, and pressure actuated means connected to the train pipe, and including a valve, to restore said releasing valve to closed position after it is opened.

[Claims 6 and 7 not printed in the Gazette.]

1,203,846. DRIVING OR TRANSMISSION GEARING. FRANK BURTT, Kalamazoo, Mich., assignor of one-half to Will Kromdyke, Jr., Portage township, Mich. Filed Feb. 24, 1914. Serial No. 820,437. (Cl. 74—58.)



1. In a structure of the class described, the combination of a driving shaft; a control clutch for said shaft comprising a shifting clutch member splined to said shaft; a beveled driving gear on said driving shaft; a pair of alined driven shafts; a pair of facing beveled gears connected by cross membefs mounted on said driven shafts for rotative and axial movement thereon; driven friction disks secured to said driven shafts; a driving friction disk disposed between said driven friction disks to coact therewith and having driving lugs radially slotted to engage said cross members of said driven gears and permitting their axial movement so that either may be brought into mesh with said driving gear, said driven disks being provided with bearings for said driving disk; a rod arranged longitudinally through said driven shafts; coiled springs arranged on said rod, thrust bearing members between said springs and the ends of said driven shafts; adjusting members threaded upon said rod to act on said springs; a control shaft supported for longitudinal and rotative movement; an arm on said control shaft engaging said shifting clutch member to actuate the same upon the longitudinal movement of said control shaft; a gear shifting arm on said control shaft connected to said driven gears whereby said gears are shifted by the rotative movement of said control shaft; and means for retaining said control shaft in its adjusted positions.

2. In a structure of the class described, the combination of a driving shaft; a control clutch for said shaft comprising a shifting clutch member splined to said shaft; a beveled driving gear on said driving shaft; a pair of driven shafts; a pair of facing beveled gears connected by cross members mounted on said driven shafts for rotative and axial movement thereon; driven friction disks secured to said driven shafts; a driving friction disk disposed between said driven friction disks to coact therewith and having driving lugs radially slotted to engage said cross members of said driven gears and permitting their axial movement so that either may be brought into mesh with said driving gear, said driven disks being provided with bearings for said driving disk; a control shaft supported for longitudinal and rotative movement; an arm on said control shaft engaging said shifting clutch member to actuate the same upon the longitudinal movement of said control shaft; a gear shifting arm on said control shaft connected to said driven gears whereby said gears are shifted by the rotative movement of said control shaft; and means for retaining said control shaft in its adjusted positions.

3. In a structure of the class described, the combination of a driving shaft; a beveled driving gear on said driving shaft; a pair of alined driven shafts; a pair of facing beveled gears connected by cross members mounted on said driven shafts for rotative and axial movement thereon; driven friction disks secured to said driven shafts; a driving friction disk disposed between said driven friction disks to coact therewith and having driving lugs radially slotted to engage said cross members of said driven gears and permitting their axial movement so that either may be brought into mesh with said driving gear, said driven disks being provided with bearings for said driving disk; a rod arranged longitudinally through said driven shafts; coiled springs arranged on said rod; thrust bearing members between said springs and the ends of said driven shafts; and adjusting members threaded upon said rod to act on said springs.

4. In a structure of the class described, the combination of a driving shaft; a beveled driving gear on said driving shaft; a pair of driven shafts; a pair of facing beveled gears connected by cross members mounted on said driven shafts for rotative and axial movement thereon; driven friction disks secured to said driven shafts; and a driving friction disk disposed between said driven friction disks to coact therewith and having driving lugs radially slotted to engage said cross members of said driven gears and permitting their axial movement so that either may be brought into mesh with said driving gear, said driven disks being provided with bearings for said driving disk.

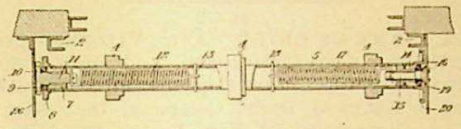
5. In a structure of the class described, the combination of a driving shaft; a control clutch for said shaft comprising a shifting clutch member splined to said shaft; a beveled driving gear on said driving shaft; a pair of driven shafts; a pair of connected facing beveled gears mounted on said driven shafts for rotative and axial movement thereon; driven friction disks secured to said driven shafts; a driving friction disk coacting with said driven friction disks and having driving connection with said driven gears; a rod arranged longitudinally through said driven shafts; an adjusting member on said rod; a spring interposed between said adjusting member and one of said driven shafts; a control shaft supported for longitudinal and rotative movement; an arm on said control shaft engaging said shifting clutch member to actuate the same upon the longitudinal movement of said control shaft; a gear shifting arm on said control shaft connected to said driven gears whereby said gears are shifted by the rotative movement of said control shaft; and means for retaining said control shaft in its adjusted positions.

[Claims 6 to 15 not printed in the Gazette.]

1,203,847. THERMAL-CONTROLLED SHUTTER. EDWARD CAHILL, New York, N. Y. Filed Sept. 8, 1915. Serial No. 49,599. (Cl. 189—58.)

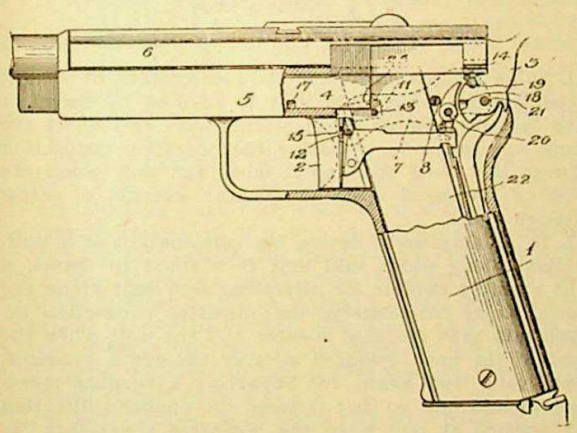
1. The combination, with a hollow shaft adapted to carry a rolling shutter, of a notched wheel having a shank

extending into one end of the shaft, a supporting bracket having a hollow stud extending into the shaft for journaling the same and through which the shank of the notched wheel extends, a counterbalancing spring attached at one end to said shank and at the other end to the shaft, a pawl adapted to be secured in locking position engaging a notch in said wheel, and thermal control means for releasing said pawl.



2. The combination, with a hollow shaft adapted to carry a rolling shutter, of a notched wheel having an integral shank extending into one end of the shaft, a supporting bracket having a hollow stud extending into one shaft for journaling the same and through which the shank of the notched wheel extends, said shank terminating at its inner end near said stud, a counterbalancing spring attached at one end to said shank and at the other end to the shaft, a pawl adapted to be secured in locking position engaging a notch in the wheel, and thermal control means for releasing said pawl.

1,203,848. SAFETY ATTACHMENT FOR FIREARMS. JOHN HOWARD CARL, Gilroy, Cal. Filed Feb. 28, 1916. Serial No. 80,900. (Cl. 42—70.)



1. In a firing mechanism for firearms, the combination with the trigger, the sliding bolt and the hammer, of a plate pivotally secured to the firearm and provided with means for locking the trigger, the sliding bolt and the hammer simultaneously.

2. In a firing mechanism for firearms, the combination with the trigger, the sliding bolt and the hammer, of a removable plate pivotally secured to the firearm and provided with means for locking the trigger, the sliding bolt and the hammer simultaneously.

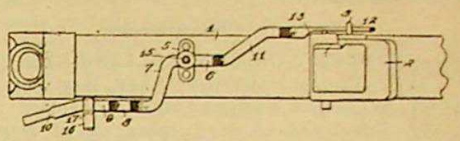
3. In a firing mechanism for firearms, the combination with the trigger, the sliding bolt and the hammer, of a plate carrying means for locking the trigger, the sliding bolt and the hammer, said plate having a split pin integral therewith adapted to pivotally secure said plate with the firearm.

4. In combination with a firearm, a safety device comprising a plate having locking means integral therewith and a pin projecting through the firearm adapted to provide a rear support for the magazine within the firearm and to secure the safety device to the firearm.

5. In combination with a firearm, a safety device secured to the side of the firearm, comprising a plate having locking means integral therewith, said plate being positioned and arranged to cover the sear and hammer pins to secure said pins within the firearm.

[Claims 6 and 7 not printed in the Gazette.]

1,203,849. UNCOUPLING-LEVER. JAMES R. CARMER, Wilmington, Del. Filed Jan. 23, 1913. Serial No. 743,802. (Cl. 213—59.)

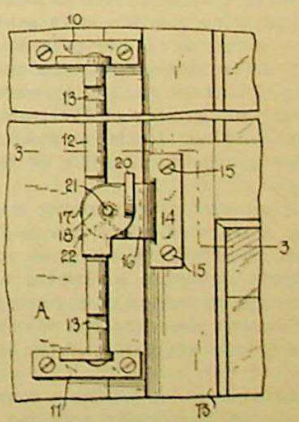


1. In a release rigging for car couplers, a one piece lever fulcrumed on the front face of the end sill of a car and having its outer end portion laterally offset from the remainder thereof and disposed permanently directly beneath the under face of the end sill for operation by the hand or foot of a trainman, means for holding said outer end stationary so far as bodily movement longitudinally of the car is concerned, said means holding the lever from falling to the track in case of breakage at the fulcrum of the lever.

2. In a release rigging for car couplers, a one piece lever fulcrumed on the front face of the end sill of a car and having its outer end portion laterally offset from the remainder thereof and disposed permanently directly beneath the under face of the end sill for operation by the hand or foot of a trainman, a stop secured to the under face of the end sill with which the outer end of the lever has operative connection, the inner end of the lever having a sliding engagement with the lock pin of the coupler, whereby said outer end is held stationary so far as bodily movement longitudinally of the car is concerned, and whereby said lever is maintained in substantially normal position in case of breakage at either the fulcrum or at the point where the lever enters the lock pin of the coupler.

3. In a release rigging for car couplers, a one piece lever pivotally mounted on the front face of the end sill of a car, and having its outer end permanently disposed underneath the under face of the end sill and its inner end connected directly to the coupler locking pin, a vertical stop for the outer end of the lever functioning as a fulcrum for the lever when it slides on its pivot with the coupler in service movements.

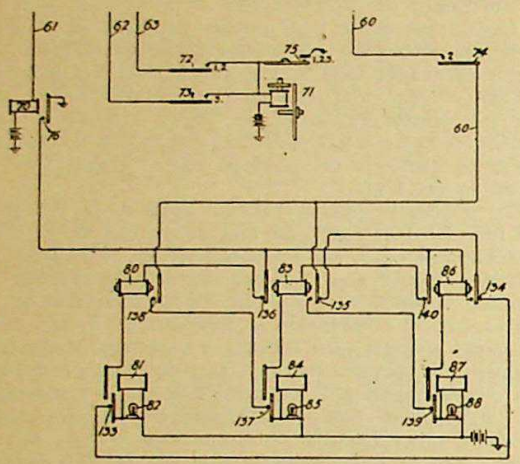
1,203,850. SASH-LOCK. ALBERT C. CHRISTENSON, Bushnell, Nebr. Filed Feb. 11, 1916. Serial No. 77,673. (Cl. 16—118.)



The combination with a window frame and a sash, of brackets mounted upon the window frame, a vertically disposed rod mounted in said brackets and having spaced horizontal notches, a bracket mounted upon the window sash and having a portion extending outward and laterally transversely of the outer face of the rod, an angular latch pivoted upon said bracket for movement in a vertical plane parallel to the face of the window sash and frame and having a detent on its lower end engageable in any one of said notches, and a finger piece on the other end, a spring normally urging the latch in a direction

to carry its detent into engagement with the notch in the rod and a stop limiting the movement of the latch under the action of the spring to a position where the detent is in a horizontal plane.

1,203,851. SYSTEM FOR CONTROLLING ELECTRICAL CIRCUITS. EDGAR HARRISON CLARK, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 2, 1915. Serial No. 37,696. (Cl. 179—18.)



1. A controlling apparatus comprising a source of electrical impulses, a train of relays, means for causing the first impulse to effect the operation of the first relay of the train, an energizing circuit for each succeeding relay of the train adapted to be brought into operative relation with said source of impulses by the operation of the preceding relay of the train, a locking circuit for each relay closed in the operation of said relay and opened in the operation of the succeeding relay of the train, and a switch for opening the locking circuit of the last relay of the train.

2. A controlling apparatus comprising a source of electrical impulses, a train of relays, an energizing circuit for the first relay of the train normally adapted for connection with said source of impulses, an energizing circuit for each succeeding relay of the train adapted to be brought into operative relation with said source of impulses by the operation of the preceding relay of the train, a signal device operated in the operation of each relay, a locking circuit for each relay opened by the operation of the succeeding relay of the train, and a switch for opening the locking circuit of whichever relay may remain operated at the termination of the train of impulses.

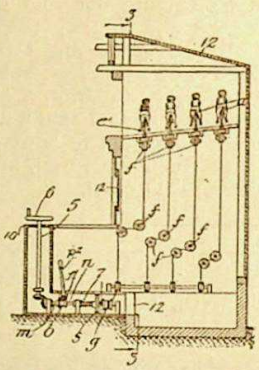
3. A controlling system comprising a source of electrical impulses, a train of relays, means for causing successive impulses to effect the operation of successive relays of said train, a signal associated with each relay and displayed in the operation of the same, and a locking circuit for each relay closed in the operation of said relay and opened in the operation of the succeeding relay of the train.

4. A signaling system comprising a source of electrical impulses, a train of electrically actuated signal devices, means for causing successive impulses to effect the operation of successive devices of said train, means associated with each device and rendered active in the operation thereof for maintaining said device in its operated condition, said maintaining means being rendered inoperative by the operation of the succeeding device in the train.

5. A controlling system comprising a source of impulses, a train of relays, an energizing circuit for the first relay in said train serially including normally closed contacts of the succeeding relays in the train, an energizing circuit for each succeeding relay operatively connected with said source of impulses by the operation of the preceding relay of the train, a locking circuit for each relay made active in the operation thereof, means operated in the operation of each relay for rendering inactive the locking circuit of the preceding relay of the train, means for rendering inactive the locking circuit of the last relay of said train, and a responsive device associated with each relay and actuated in the operation thereof.

[Claims 6 to 14 not printed in the Gazette.]

1,203,852. GAME OF SKILL. AXEL VALDEMAR CLORIUS, Frederiksberg, near Copenhagen, and ODIN THORVALD CLORIUS, Hellerup, near Copenhagen, Denmark, assignors to Kentucky Derby Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 30, 1915. Serial No. 53,263. (Cl. 46—56.)



1. In an amusement device, the combination of a unit, a course along which said unit is adapted to travel, a hand operated member for displacing said unit along the course and means for releasing the operative connection between said hand operated member and unit when the speed of the hand operated member exceeds a predetermined value.

2. In an amusement device, the combination of a unit, a course along which said unit is adapted to travel, a hand operated member for displacing said unit along the course, means for releasing the operative connection between said hand operated member and the unit when the speed of the hand operated member exceeds a predetermined value and means for imparting a turning movement to said unit so that it faces the opposite direction and remains at rest when the operative connection between the hand operated member and unit is released.

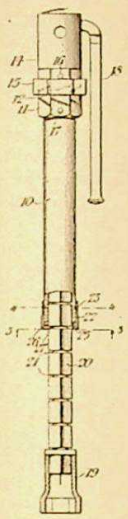
3. In an amusement device, the combination of a number of units, a course along which said units are adapted to travel, hand operated members for displacing said units along the course, and means for releasing the operative connection between said hand operated members and units when the speed of the hand operated members exceeds a predetermined value.

4. In an amusement device, the combination of a number of units, a course along which said units are adapted to travel, hand operated members for displacing said units along the course, means for releasing the operative connection between said hand operated members and units when the speed of the hand operated members exceeds a predetermined value and means for imparting a turning movement to said units so that they face the opposite direction and remain at rest when the operative connection between the hand wheels and units is released.

5. In an amusement device, the combination of a number of units, a course along which said units are adapted to travel, hand wheels for displacing said units along the course, means for releasing the operative connection between said hand wheels and units when the speed of the hand wheels exceeds a predetermined value, and means for imparting a turning and retrograde movement to said units when the operative connection between the hand wheels and units is released.

[Claims 6 to 44 not printed in the Gazette.]

1,203,853. EXTENSIBLE TOOL. CAMILLE CONTAL, St.-Cloud, France, assignor, by mesne assignments, to Albert T. Otto & Sons, New York, N. Y., a Corporation of New York. Filed Feb. 26, 1914. Serial No. 821,344. (Cl. 81—177.)

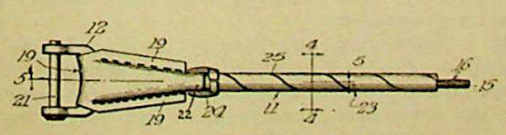


1. In combination, a tubular member having a bore polygonal in section, a rod polygonal in section and adapted to move longitudinally within said bore, said rod having a plurality of recesses, a collar carried by said tubular member and having a flange adapted to enter any one of said recesses when in one position, and to permit the free longitudinal movement of said rod when in a second position, a spring normally tending to hold said collar in said first-mentioned position, and stops for limiting the movement of said collar.

2. A tool including a handle comprising two telescoping members held against rotation in respect to each other, a work-engaging part detachably secured to one end of one member, means at the other end of the other member for rotating said handle, the inner member having a series of recesses therein arranged along the length thereof and the outer member having a rotatable collar provided with a projection adapted to enter any one of said recesses to prevent relative longitudinal movement and adapted, when in a second position, to permit free relative longitudinal movement of said members.

3. A tool handle, comprising two telescoping members held against rotation in respect to each other, the inner member having a series of recesses therein arranged along the length thereof, a rotatable collar provided with an inwardly directed flange at one end of the outer member and including a portion adapted to enter any one of said recesses and prevent relative longitudinal movement and adapted, when rotated to a predetermined position, to permit free relative longitudinal movement of said members, and a coil spring between said flange and the extremity of said outer member and having engagement with each to normally hold said collar in locking position.

1,203,854. TRACE. CHARLES J. COOPER, Moline, Ill., assignor of one-half to H. W. Cooper Saddlery Hardware Mfg. Company, Moline, Ill., a Corporation of Illinois. Filed June 30, 1916. Serial No. 106,766. (Cl. 54—52.)



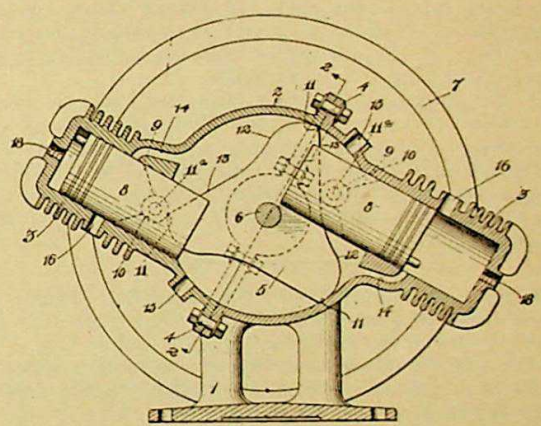
1. In a trace, the combination of a wire cable, a clevis in which said wire cable is secured, a covering for said clevis, and a covering for said cable secured to the clevis covering.

2. In a trace, the combination of a wire cable, a clevis in which said cable is secured, a leather covering for said clevis, a helical leather covering for said cable having its end sewed to the clevis covering with a butt joint, and a metal band covering the joint.

3. In a trace, the combination of a clevis provided with a tapered socket, a cable having its end entering said socket and fanned out within said socket, a metal filling for said socket, a leather covering for the socket having a pair of ends extending beyond the end of the socket, and a helical leather covering for said cable and secured to the end of said clevis covering.

4. In a trace, the combinaion of a clevis provided with a tapered socket, a cable having its end entering said socket, and fanned out within said socket, a metal filling for said socket, a leather covering for the socket having a pair of ends extending beyond the end of the socket, a helical leather covering for said cable and sewed to the ends of said clevis covering, and a metal band surrounding the sewed joint and spaced apart from the end of the socket.

1,203,855. INTERNAL-COMBUSTION ENGINE. WALTER H. D'ARDENNE, Philadelphia, Pa. Filed Oct. 5, 1915. Serial No. 54,147. (Cl. 123—55.)



1. In an internal combustion engine, the combination with a cam case, of a shaft mounted centrally in the cam case, a cam on the shaft fitting the cam case, a cylinder having fixed relation to the cam case and located tangentially to the axis of the shaft, a piston in the cylinder directly engaging the cam, means for directing explosive mixture into the cam case, and said cam case having passages connecting the same with the cylinders through which passages the mixture is forced by the cam, substantially as described.

2. In an internal combustion engine, the combination with a cam case, of a shaft mounted centrally in the cam case, a cam on the shaft fitting the cam case, a cylinder having fixed relation to the cam case and located tangentially to the axis of the shaft, a piston in the cylinder having a recess in its end in which the cam is positioned, a roller in the recess directly engaging the cam, means for directing explosive mixture into the cam case, and said cam case having passages connecting the same with the cylinders through which passages the mixture is forced by the cam, substantially as described.

3. In an internal combustion engine, the combination with a cam case, and a cylinder communicating with the cam case and located at an angle to the axis of the cam case, of a piston in the cylinder, and a cam in the cam case directly engaging the piston, said cam operating as a compression means in the cam case for forcing gas into the cylinder, substantially as described.

4. In an internal combustion engine, the combination with a cam case, and a plurality of cylinders communicating therewith, said cylinders having exhaust ports in one side and inlet ducts in their other sides communicating with the cam case, of pistons in the cylinders, and a cam in the cam case engaging the pistons, movable by the pistons, and constructed to force gas under compres-

sion through the said ducts into the cylinder, substantially as described.

5. In an internal combustion engine, the combination with a cam case, and a plurality of cylinders communicating therewith, said cylinders having exhaust ports in one side and inlet ducts in their other sides communicating with the cam case, of pistons in the cylinders, a cam in the cam case having a plurality of points, said cam fitting the cam case and compressing gas into the cam points forcing the said gas through the ducts into the cylinders, and said cam constructed to move the pistons and moved thereby, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,203,856. PROCESS OF MAKING AN ADHESIVE FROM WASTE SULFITE LIQUOR. JUDSON A. DE CEW, Montreal, Quebec, Canada. Filed Feb. 17, 1913. Serial No. 748,989. (Cl. 87—17.)

1. The process of making a cementing agent consisting in concentrating waste sulfite liquor in the presence of excess magnesium oxid and adding thereto magnesium chlorid to form magnesium oxychlorid.

2. The process of making a cementing agent consisting in concentrating waste sulfite liquor in the presence of an excess of magnesium oxid and adding thereto certain quantities of magnesium chlorid in equivalent molecular proportions to the amount of magnesia remaining in excess to form magnesium oxychlorid.

3. The process of making a cementing agent consisting in treating concentrated waste sulfite liquir with oxid of magnesia in excess and concentrating the material *in vacuo* in the presence of this excess magnesia and adding thereto magnesium chlorid in equivalent molecular proportion to the amount of magnesia remaining in excess to form magnesium oxychlorid.

1,203,857. ROSIN SIZING COMPOSITION. JUDSON A. DE CEW, Montreal, Quebec, Canada. Filed Oct. 12, 1914. Serial No. 866,294. (Cl. 134—21.)

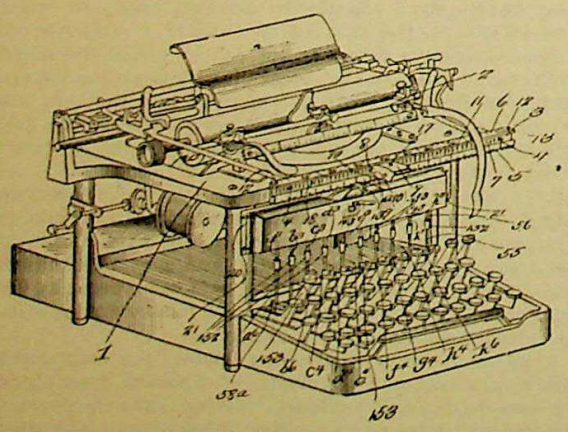
1. A sizing product consisting of a resinate in which is dissolved a rubber product substantially in the proportions specified.

2. A sizing product consisting of a rosin soap in which is dissolved approximately 1% of rubber material.

3. A sizing product comprising a saponified rosin containing rosin and a rubber product dissolved therein substantially in the proportions specified.

4. A paper sizing comprising a resinate of an alkali metal holding in solution a rubber product in the proportions specified.

1,203,858. CALCULATING ATTACHMENT FOR TYPEWRITERS. OSCAR A. DIETSCHE, Gladstone, N. D. Filed Feb. 18, 1913. Serial No. 749,099. (Cl. 235—62.)



1. In a calculating attachment for typewriters, the combination of a typewriter having a carriage and a totalizer mounted on the carriage thereof, of a motor, a mechanism controlled by said motor and geared to the totalizer and having connections with the respective number keys of the typewriter, said mechanism having means for automatically locking the motor, said means comprising a power ratchet under tension of the motor, a spring-tensioned dog having its tail engaging a tooth of the ratchet to hold the motor against operation, and a pivoted spring-tensioned plate engaging under the nose of the dog to hold the tail in engagement with the power ratchet against the action of the spring-tensioned means of the dog.

2. In a calculating attachment for typewriters, the combination of a typewriter having a carriage and a totalizer mounted on the carriage thereof, of a motor, a mechanism controlled by said motor and geared to the totalizer and having connections with the respective number of keys of the typewriter, said mechanism having means for automatically locking the motor, said means comprising a power ratchet under tension of the motor, a spring-tensioned dog having its tail engaging a tooth of the ratchet to hold the motor against operation, a pivoted spring-tensioned plate engaging under the nose of the dog to hold the tail in engagement with the power ratchet against the action of the spring-tensioned means of the dog to prevent the motor from operating until a number key of the typewriter is depressed, and means actuated by any one of the number keys and including a reciprocating member to engage said plate to move the same against the action of its spring means out of engagement with the nose of the dog, whereby the spring means of the dog will release the power ratchet, thereby causing the motor to operate the mechanism when a key is depressed to actuate the totalizer.

3. In a calculating attachment for typewriters, the combination of a typewriter having a carriage and a totalizer mounted on the carriage thereof, of a motor, a mechanism controlled by said motor and geared to the totalizer and having connections with the respective number keys of the typewriter, said mechanism having means for automatically locking the motor, said means comprising a power ratchet under tension of the motor, a spring-tensioned dog having its tail engaging a tooth of the ratchet to hold the motor against operation, an oscillatory plate engaging under the nose of the dog, and spring tensioning means for said plate to hold an edge of the plate under the nose of the dog to hold the tail in engagement with the power ratchet against the action of the spring-tensioned means of the dog.

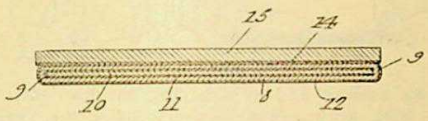
4. In a calculating attachment for typewriters, the combination of a typewriter having a carriage and a totalizer mounted on the carriage thereof, of a motor, a mechanism controlled by said motor and geared to the totalizer and having connections with the respective number keys of the typewriter, said mechanism having means for automatically locking the motor, said means comprising a power ratchet under tension of the motor, a spring-tensioned dog having its tail engaging a tooth of the ratchet to hold the motor against operation, an oscillatory plate engaging under the nose of the dog, spring-tensioning means for said plate to hold an edge of the plate under the nose of the dog to hold the tail in engagement with the power ratchet against the action of the spring-tensioning means of the dog, and means actuated by any one of the number keys and including a reciprocating member engaging said plate to move the same against the action of said spring-tensioning means out of engagement with the nose of the dog, whereby the spring means of the dog will release the power ratchet, thereby causing the motor to operate the mechanism when a key is depressed to actuate the totalizer.

5. In a calculating attachment for typewriters, the combination of a typewriter having a carriage and a totalizer mounted on the carriage thereof, of a motor, a mechanism controlled by said motor and geared to the totalizer and having connections with the respective number keys of the typewriter, said mechanism having means for automatically locking the motor, said means comprising a power ratchet under tension of the motor, a spring-tensioned dog having its tail engaging a tooth of the

ratchet to hold the motor against operation, an oscillatory plate engaging under the nose of the dog, spring-tensioning means for said plate to hold an edge of the plate under the nose of the dog to hold the tail in engagement with the power ratchet against the action of the spring-tensioning means of the dog, means actuated by any one of the number keys and including a reciprocating member engaging said plate to move the same against the action of said spring-tensioning means out of engagement with the nose of the dog, whereby the spring means of the dog will release the power ratchet, thereby causing the motor to operate the mechanism when a key is depressed to actuate the totalizer, means bearing upon said reciprocating member, and a device carried by the totalizer to force said last-named means against said member to cause it to engage said plate when reciprocated.

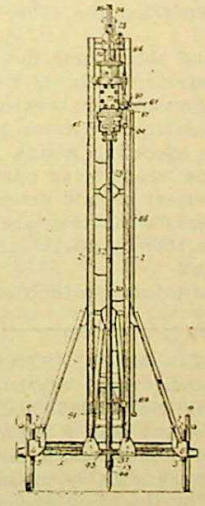
[Claims 6 to 34 not printed in the Gazette.]

1,203,859. BELT. WILLIAM DUECKER, Memphis, Tenn. Filed Nov. 19, 1914. Serial No. 873,053. (Cl. 74—63.)



A driving belt comprising a leather body; a textile facing the longitudinal edges of which are folded inwardly toward each other in opposite directions and are located in a common plane, the inwardly folded edges of the facing being secured to the body, and the body being of substantially the same width as the facing; and a core within the facing and substantially filling the same; the ends of the body being beveled and overlapped and the ends of the facing and the core being beveled and overlapped, the bevels of the body on one hand and of the facing and the core upon the other hand being inclined in opposite directions.

1,203,860. DRILLING-MACHINE. HARRIS T. DUNBAR, Buffalo, N. Y. Filed Mar. 20, 1913. Serial No. 755,577. (Cl. 255—38.)



1. A drilling machine comprising a chamber adapted to receive and deliver a pressure medium and having an open lower end, a guide tube communicating at its upper end with the lower end of said chamber so as to receive the pressure medium therefrom and bearing at its upper end against the lower end of said chamber, a drill rod reciprocating in said tube and provided at its lower end with a bit which is compelled to turn with said tube but free to move lengthwise independently thereof, and means for rotating said tube.

2. A drilling machine comprising a chamber adapted to receieve and deliver a pressure medium and having an open lower end, a guide tube communicating at its upper end with the lower end of said chamber so as to receive the pressure medium therefrom and provided at its upper end with an upwardly flaring flange which bears against the lower end of said chamber, a drill rod reciprocating in said tube and provided at its lower end with a bit which is compelled to turn with said tube but is free to move lengthwise independently thereof, and means for rotating said tube.

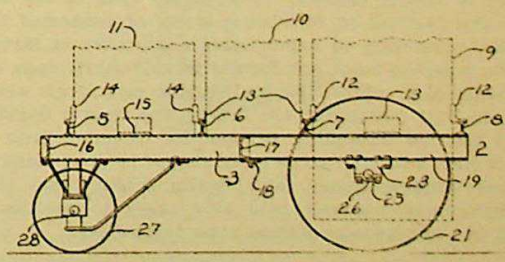
3. A drilling machine comprising a chamber adapted to receive and deliver a pressure medium and having an open lower end, a guide tube communicating at its upper end with the lower end of said chamber so as to receive the pressure medium therefrom and provided at its upper end with an upwardly flaring flange which bears against the lower end of said chamber, a drill rod reciprocating in said tube and provided at its lower end with a bit which is compelled to turn with said tube but is free to move lengthwise independently thereof, and means for rotating said tube comprising a gear rim arranged an said flange and a motor having a pinion meshing with said gear rim.

4. A drilling machine comprising a chamber adapted to receive and deliver a pressure medium and having an open lower end, a guide tube communicating at its upper end with the lower end of said chamber so as to receive the pressure medium therefrom and bearing at its upper end against the lower end of said chamber, a cap inclosing the upper end of said tube and secured at its margin to the lower end of said chamber and provided centrally with a stuffing box in which said tube turns and a drill rod which reciprocates in said tube.

5. A drilling machine comprising a rotatable guide tube, a bit mounted on said tube so as to turn therewith but be capable of lengthwise movement independently thereof, a drill rod reciprocating in said guide tube and operatively related to said bit, a water motor operatively connected with said tube for turning the same and having its water outlet communicating with the upper end of said guide tube, a water supply pipe having a branch communicating with the inlet of said motor and another branch communicating with the upper end of said guide tube, and a water controlling valve for directing the water from said supply pipe into either one or the other of said branch pipes.

[Claims 6 to 20 not printed in the Gazette.]

1,203,861. TRUCK. HENRY P. J. EARNSHAW, Boston, Mass., assignor to Earnshaw Manufacturing Company, Incorporated, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 29, 1916. Serial No. 87,399. (Cl. 21—182.)



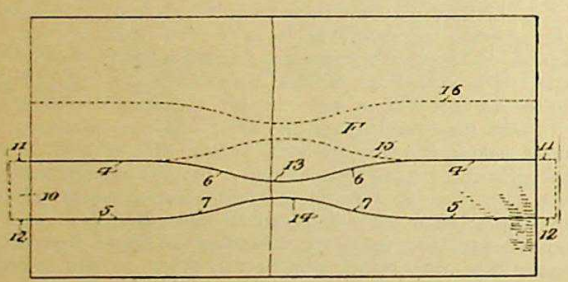
1. A vehicle frame having a body comprising parallel sides, a transverse connecting member connected with the sides between the ends thereof and extending outwardly therefrom, a second transverse connecting member connected with said sides and also extending outwardly therefrom, one of said connecting members being located above and the other beneath said sides, longitudinally extending connecting members overlying and underlying the extended portions respectively of the transverse connecting members, axles supported by the sides and also by the longitudinally extending members, and wheels on the axles, between said sides and respective longitudinally extending members.

2. A vehicle frame having a body comprising parallel sides, struts spaced from each other longitudinally of the

body and connecting the sides, a transverse connecting member connected with the sides between the ends thereof and extending outwardly therefrom and located beneath said sides, a second transverse connecting member located above said sides approximately at the end of the body and extending outwardly from the body at opposite ends thereof, longitudinally extending connecting members overlying and underlying the extended portions respectively of the transverse connecting members, axles supported by the sides and also by the longitudinally extending members, and wheels on the axles, between said sides and respective longitudinally extending members.

3. A vehicle frame having a body comprising sides, transverse members connected with the sides and extending outwardly therefrom, members extending longitudinally of the frame and connecting said extended portions to thereby provide outriggers, wheels within said outriggers, coaxial axles on which said wheels are mounted and carried respectively by the sides and longitudinally extending connecting members, and the rear one of said transverse members being bolted to said sides, the two transverse members being separated longitudinally of the body to receive therebetween a boiler.

1,203,862. METHOD OF CUTTING AND ARRANGING MATERIAL FOR COLLARETS. GEORGE W. EBERLEY, Whitesboro, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 6, 1912. Serial No. 729,835. (Cl. 2—66.)



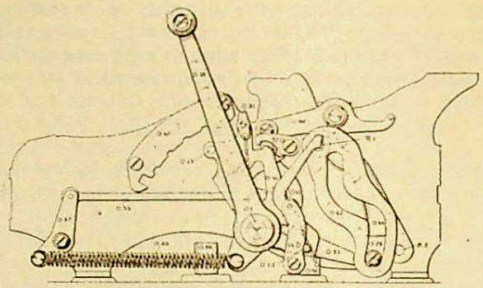
1. The method of forming a series of connected shaped fabric blanks, consisting in piling the fabric in connected layers formed by a fold in the fabric, laid alternately at opposite sides of the pile, and cutting said piled fabric from one folded edge to the other, said lines of cutting being spaced and positioned so as to form connected blanks, each blank containing a fold in the piled fabric, which is located midway between the ends of the blank.

2. The method of forming a series of connected fabric blanks, consisting of superposing a plurality of layers of fabric, whereby folds are formed in said fabric upon opposite sides of a center line, and cutting said fabric whereby said lines of cutting at the center line form a double tapered portion extending in opposite direction from said center line, so that two or more shaped collaret blanks are formed simultaneously, and finally folding said blanks longitudinally between said side edges to position the edges of the tapered portions upon themselves.

1,203,863. MECHANICAL CALCULATOR. HALCOLM ELLIS, East Orange, N. J. Filed Oct. 13, 1914. Serial No. 866,481. (Cl. 235—133.)

1. In an adding and subtracting mechanism, the combination with accumulator wheels, of a reciprocating "carrying" detent adapted to move forward or backward constituting a single means adapted, on movement in one direction, to directly engage and turn an accumulator wheel of a higher order in a forward direction and, on movement in the other direction to turn the accumulator wheel in a backward direction, and means under the control of the accumulator wheels for positively shifting said detent in one direction or the other to effect "carrying" for either addition or subtraction.

2. In an adding and subtracting mechanism, the combination with accumulator wheels, of a reciprocatory "carrying" detent adapted to move forward or backward constituting a single means adapted, on movement in one direction, to directly engage and turn an accumulator wheel of a higher order in a forward direction and, on movement in the other direction to turn the accumulator wheel in a backward direction, and selectively settable means under the control of the accumulator wheels for positively shifting said detent in one direction or the other to effect "carrying" for either addition or subtraction.



3. In an adding and subtracting mechanism, the combination with accumulator wheels, of a "carrying" detent adapted to move forward or backward and, on movement in either direction, to turn an accumulator wheel of a higher order in a forward or backward direction, means for moving said detent comprising two mechanisms both controlled by a wheel of a lower order, one mechanism being adapted to move the detent in one direction and the other mechanism to move said detent in the opposite direction.

4. In an adding and subtracting mechanism, the combination with accumulator wheels, of a "carrying" detent adapted to move forward or backward, and on movement in either direction to turn an accumulator wheel of higher order in a forward or backward direction, means for moving said detent comprising two mechanisms both controlled by a wheel of a lower order, one mechanism being adapted to move the detent in one direction and the other mechanism to move said detent in the opposite direction, and means for selectively locking one of said mechanisms when rendering the other mechanism operative.

5. In an adding and subtracting mechanism, the combination with accumulator wheels, of "carrying" detents adapted to move forward or backward, according to whether addition or subtraction is to be performed, and selectively controlled operating means for said carrying detents, said operating means being adapted to determine the direction of movement of said detents when carrying and to lock said detents when they are not operated for carrying purposes, to thereby adapt said detents to lock the accumulator wheels.

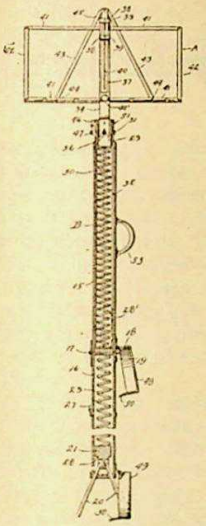
[Claims 6 to 19 not printed in the Gazette.]

1,203,864. COMBINED MUSIC STAND AND CASE. CHRISTIAN M. ENGEBRETSON, Starbuck, Minn. Filed Mar. 8, 1915. Serial No. 13,065. (Cl. 45—121.)

1. In a music stand and case, a standard consisting of a pair of alined tubular members, a desk carried by one of the members, a block slidably mounted in the other member, legs carried by the block and adapted to extend through the lower end of the last mentioned member, a spring for forcing the block toward the lower end of the member, a locking plate rotatably mounted on the lower end of the tubular member adjacent the legs, the said plate having a plurality of radially extending slots through which the legs extend and offset portions in the slots, the said plate being arranged by its rotation on the lower end of the standard to maintain the legs in their extended positions when the legs are located in the offset portions of the slots.

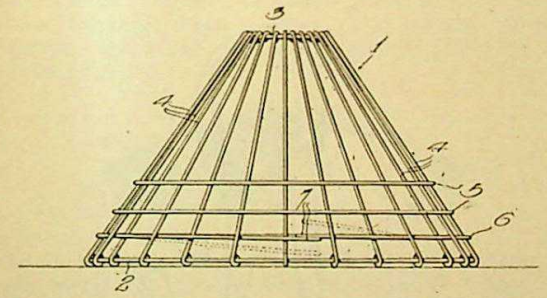
2. In a music stand, the combination with a tubular member, of a socket member slidably mounted therein, an

arm carried by the socket member, a strip slidably mounted on the arm, pairs of arms pivotally mounted on the first mentioned arm, bars pivotally connecting the ends of the corresponding members of the pairs, resilient means for normally maintaining the pairs of arms in angular relation to the first mentioned arm, brace bars pivotally



connected to the lowermost pair of arms and to the upper end of the strip, an abutment on one of the brace members and a latch member carried by said socket member for engaging the abutment to maintain the first mentioned arm and the elements carried thereby within the tubular member.

1,203,865. POULTRY-FEEDER. ANDREW A. FAIR, Sioux City, Iowa. Filed Jan. 6, 1916. Serial No. 70,665. (Cl. 119—19.)

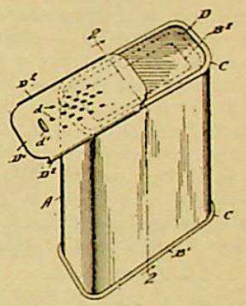


1. A poultry feeder comprising a cage in which feed is to be placed, said cage including a plurality of upstanding rods spaced apart distances to allow comparatively large birds to pass therebetween, a horizontally disposed hoop secured to said rods and spaced upwardly from the lower ends thereof a distance to allow such comparatively large birds to pass thereunder, and a movable hoop spaced beneath the other hoop and adapted to be adjusted vertically to only admit birds under a certain size.

2. A poultry feeder comprising a cone-shaped cage including a plurality of upwardly and inwardly inclined rods spaced apart at their lower ends distances to allow comparatively large chicks to pass therebetween, a fixed horizontal hoop secured to said rods and spaced upwardly a sufficient distance to allow said comparatively large chicks to pass thereunder, and a vertically adjustable hoop contacting with the rods and disposed below the aforesaid hoop to permit only fowls under a certain size to enter the cage, said second hoop being split to allow it to contract when adjusted upwardly along the rods and to expand when moved downwardly thereon.

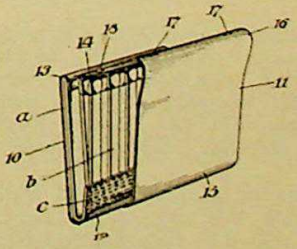
3. A poultry feeder comprising a cone-shaped cage including a plurality of upwardly and inwardly inclined rods forming the wall of said cage, the lower end of said rods being spaced sufficiently to allow comparatively large chicks to pass therebetween, a fixed horizontal hoop secured to said rods and spaced upwardly a distance to allow said comparatively large chicks to pass thereunder, and a vertically adjustable hoop disposed beneath the other hoop to allow only chicks under a certain size to enter the cage, said vertically adjustable hoop being split to allow it to expand and contract when adjusted vertically, and being passed under certain rods and over others whereby it will be held in vertically adjusted position by frictional contact with said rods.

1,203,866. CONTAINER. BEN KING FORD, Detroit, Mich., assignor to Detroit Can Company, Detroit, Mich., a Corporation of New Jersey. Filed Mar. 20, 1913. Serial No. 755,580. (Cl. 221—61.)



A container having an end of flat-sided form, said end consisting of sheet metal the edges of which are bent to form outstanding flanges which engage and hold the end edges of the body of the container, said end being countersunk within the said flanges to form a space for receiving a removable seal piece and being perforated beneath the seal piece; a sliding cover of sheet metal having opposite straight edges which are bent to embrace the said flanges of the end; and said separate removable seal piece being confined by said cover in the countersunk portion of the end and sealing the perforation in the end.

1,203,867. MATCH-HOLDER. SAMUEL M. FRIEDE, New York, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1914. Serial No. 877,014. (Cl. 206—33.)



1. A match holder comprising a casing open at its ends and provided on one of its inner walls with vertically spaced means for slidingly engaging and holding a match package adjacent the head and basal portions of the matches, whereby said package can be slid into or from either open end of the casing in a path at right angles to the length of the matches.

2. A match holder comprising associated body and cover portions, the body portion having therein top and bottom channels adapted to receive and slidingly hold the upper and lower edges respectively of a match package adjacent the head and basal portions of the matches, whereby said package can be slid into or from either open end of the casing in a path at right angles to the length of the matches.

3. A match holder comprising a body portion having therein top and bottom channels adapted to receive and slidingly hold the upper and lower edges respectively of a match package adjacent the head and basal portions of

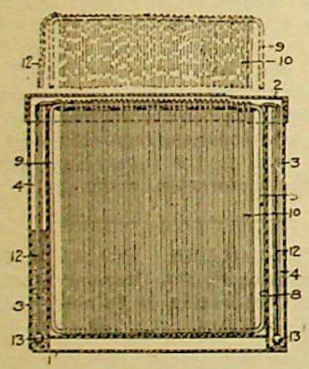
the matches, whereby said package can be slid into or from either open end of the casing in a path at right angles to the length of the matches, and comprising also a cover portion slidingly fitted to the body portion, whereby relative bodily endwise movement of the casing and the cover can be effected in order to expose the matches and the ignition or striking surface therefor at either end of the casing.

4. A match holder comprising body and cover portions, the body portions having spaced flanges providing channels to receive and hold a match package, and having also a forwardly projecting ledge adapted to overhang the match heads of the package, and the cover portion having a top ledge and a bottom flange slidingly fitted respectively to the ledge and bottom flange of the body portion.

5. A match holder comprising a body portion having channels on its inner side spaced to receive and slidingly hold the upper and lower edges of a match package adjacent the head and basal portions of the matches, whereby said package can be slid into or from either open end of the casing in a path at right angles to the length of the matches, a cover slidingly fitted to said body portion, and a limiting stop for the cover, whereby relative bodily endwise movement of the casing and the cover can be effected in order to expose the matches and the ignition or striking surface therefor at either end of the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,203,868. SANITARY SCREEN. FRANCIS GRANGER, Greensburg, Pa. Filed Sept. 25, 1913. Serial No. 791,736. (Cl. 137—154.)



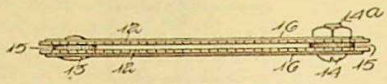
1. In a vaporizer, the combination with a supporting frame having hollow side members forming fluid reservoirs, and having guide-ways, a wick frame having absorbent material stretched thereover, said frame being adapted to be placed in said guide-ways with a portion of said absorbent material extending into one of said reservoirs.

2. In a vaporizer, the combination with a supporting frame comprising side and bottom members, said side members being hollow to form fluid reservoirs and having guide-ways formed thereon, a wick frame adapted to fit within said guide-ways and carrying a wick member adapted to extend into one of said reservoirs and a cap member for said frame adapted to inclose said reservoirs and confine said wick frame within said main frame.

3. A vaporizer, comprising a supporting frame having hollow side members forming separate fluid reservoirs, a plurality of interchangeable separate wick frames carrying wicks the terminals of which are adapted to extend into said reservoirs, means for holding said wick frames in said supporting frame in operative connection with said reservoirs.

1,203,869. CORN AND CALLOUS REMOVER. BARRY E. HALE, Greenfield, Mass. Filed Jan. 15, 1916. Serial No. 72,341. (Cl. 30—23.)

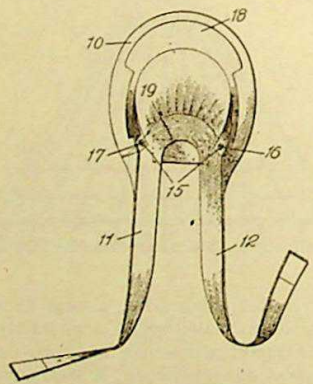
1. A corn-removing implement, comprising two thin saw blades placed side by side with their serrated edges parallel and flush with each other, spacing washers interposed between said blades, and formed to separate the blades by a space substantially equal to the thickness of a blade, and transverse fastening members connecting said blades and washers, the thickness and spacing of the blades being such that their serrated edges are adapted to act simultaneously on a corn and form independent kerfs therein.



2. A corn-removing implement, comprising two thin saw blades placed side by side with their serrated edges parallel and flush with each other, spacing washers interposed between said blades, and two transverse fastening members connecting said blades and washers, and formed to separate the blades by a space substantially equal to the thickness of a blade, one of said fastening members being inseparably connected with the blades to form a permanent hinge, and the other member being removable to permit the blades to swing independently on the said hinge.

3. A corn-removing implement, comprising two thin saw blades placed side by side with their serrated edges parallel and flush with each other, spacing washers interposed between said blades, and formed to separate the blades by a space substantially equal to the thickness of a blade, reinforcing strips bearing on the outer sides of said blades, and transverse fastening members connecting said blades, washers and strips, and provided with means for clamping the strips against the blades, the lower edges of said strips being located above the serrated edges of the blades, and constituting gages limiting the depth of cut of the serrated edges.

1,203,870. COMBINED HOOD AND SCARF. SAMUEL W. HALLAM and AMBROSE T. HOULDSWORTH, New York, N. Y. Filed Jan. 5, 1915. Serial No. 612. (Cl. 2—118.)

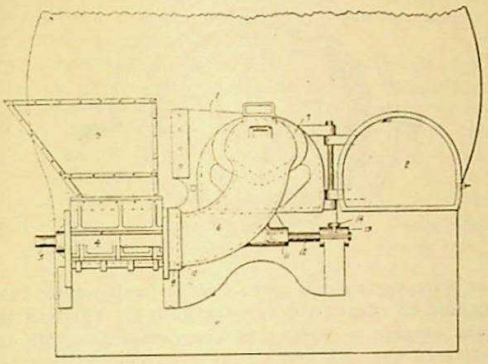


1. In a head covering, a hood member adapted to be applied to the head of a person to cover the back and top thereof, and a U-shaped scarf member secured at its central portion to the rear lower edge of said hood member, the ends of said scarf member being free and adapted to be passed around the neck of the wearer in overlapping engagement; said hood member being provided at its front edge with a vizor lying normally flat upon the top thereof and adapted to be turned downwardly to partially cover the face of the wearer and conforming to the shape thereof, together with an independent flap attached to the rear portion of the scarf member and depending loosely therefrom to protect the back of the neck of the wearer.

2. In a head covering, a hood member adapted to be applied to the head of a person to cover the back and top thereof, a U-shaped scarf member secured at its central portion to the rear lower edge of the hood member, the ends of said scarf being free and adapted to be passed around the neck of the wearer in overlapping engagement,

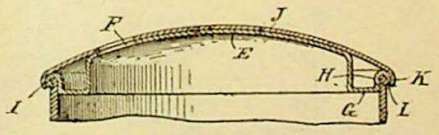
and a welt attached to the front edge of said hood member and adapted to have its ends meet under the chin of the wearer, together with means for detachably attaching said ends substantially as described.

1,203,871. MECHANICAL STOKER. WILLIAM T. HANNA, Cincinnati, Ohio, assignor, by mesne assignments to The Mechanical Construction Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 2, 1912. Serial No. 669,057. (Cl. 110—101.)



In a mechanical stoker, the combination with a furnace having a fuel opening, of a hopper located to one side of said opening, a door for said opening hinged at the opposite side wall, a fuel conduit extending from said hopper beneath said door and carrying a hood adapted to extend up to and to close said fuel opening, said conduit being rotatably supported upon a bearing at the delivery end of the hopper and upon an axle concentric with said delivery end to expose or connect with said fuel opening.

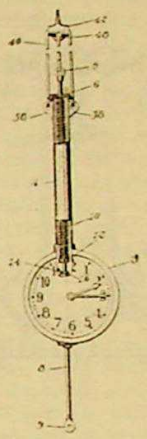
1,203,872. DREDGING-CAN. JERVIS R. HARBECK, Detroit, Mich., assignor, by mesne assignments, to Detroit Can Company, Detroit, Mich., a Corporation of New Jersey. Filed Nov. 22, 1909. Serial No. 529,426. (Cl. 221—64.)



In a dredging can, in combination: a fiber body; a sheet metal top formed with an upwardly bulged and perforated central portion, an outer channel portion, a vertical flange fitting the interior of the body and a seam flange which is crimped into the exterior of the end of the fiber body so as to permanently compress and secure the same against said vertical flange of the top; and a perforated outwardly bulged cover the central portion of which fits on the bulged portion of said top and extends over said channel portion and seam flange of the top, said cover being formed with a marginal flange bent downwardly and inwardly to embrace the exterior of the said seam flange, to rotatably hold the cover to the top.

1,203,873. TIME-CONTROLLED APPARATUS. ARTHUR G. HATCH and FRED WALDORF, Duluth, Minn. Filed Dec. 10, 1915. Serial No. 66,184. (Cl. 161—8.)

1. In an apparatus of the character described, the combination of a clock mechanism, a trip mechanism controlled thereby and including a toothed wheel, a casing for said mechanisms, a rod guided in said casing to slide relatively thereto and having a member arranged to mesh with said wheel, said trip mechanism being constructed and arranged to hold the wheel against rotation in one direction until released by said clock mechanism, but permitting rotation of said wheel in the opposite direction at all times, means connected with said casing constructed and arranged to support it in a suspended position, and a spring independent of said trip mechanism acting on said rod to move it when said wheel is released by said trip mechanism.



2. In an apparatus of the character described, the combination of a clock mechanism, a trip mechanism controlled thereby, a casing inclosing said mechanisms, a casing extension projecting upwardly therefrom and constructed to hang vertically from a suitable support while in use, a member mounted for movement longitudinally in said extension and coöperating with said trip mechanism to enable the trip mechanism to hold it against movement in one direction, and a spring positioned in said extension and acting on said member to move it in said direction when it is released by said trip mechanism.

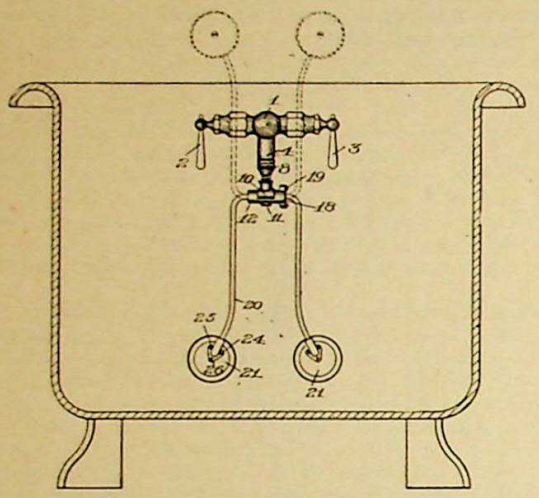
3. In an apparatus of the character described, the combination of a clock mechanism, a casing inclosing said mechanism, a tube projecting upwardly from said casing, a rod mounted for longitudinal movement in said tube, means connected with said tube whereby the casing may be hung in a vertical position while in use, a spring positioned in said tube and connected with said rod to raise it, a toothed part on said rod, and a trip mechanism controlled by said clock mechanism and including a toothed wheel arranged to be engaged and rotated in one direction by said toothed part, said trip mechanism being operative to hold the rod normally against upward movement until released by said clock mechanism.

4. An apparatus of the character described having, in combination, a clock mechanism, a casing therefor, a spring support extending vertically from said casing, said support being constructed and arranged to hang from a suitable support thus sustaining the apparatus in a supended position while in use, a helical tension spring connected at its upper end to said support, a member connected to the lower end of said spring to be lifted thereby, a trip mechanism arranged to be controlled by said clock mechanism and including a part normally prevented from moving in one direction by said trip mechanism but freely movable in the opposite direction, said part coöperating with said member to enable the trip mechanism normally to prevent the spring from moving said member.

5. An apparatus of the character described having, in combination, a clock mechanism, a casing therefor, a casing extension projecting vertically therefrom, a rod mounted to slide longitudinally of said extension, a spring supported by said extension and connected with said rod to raise it, a rack on said rod and a trip mechanism controlled by said clock mechanism and including a toothed wheel with which said rack is arranged to mesh, said wheel being mounted to be rotated by said rack upon its downward movement but being operative normally to prevent the rack from moving upwardly.

[Claim 6 not printed in the Gazette.]

1,203,874. BATH APPLIANCE. FREDERICK O. HILFIKER, Rochester, N. Y. Filed Feb. 7, 1914. Serial No. 817,177. (Cl. 4—26.)



1. In a spray attachment for bath tubs, the combination with a supply head adapted to be connected to the faucet of the tub and having a direct discharge outlet, of a spray member embodying a tubular arm having a spray head at its outer end and arranged to turn about a horizontal axis with its interior in communication with the interior of the supply head and adapted to be rotated to an operative position above or an inoperative position below the supply head and faucet, and a valve portion within the head controlled by the spray member for closing the discharge outlet in the head when the spray member is in operative position.

2. In a spray attachment for bath tubs, the combination with a supply head adapted to be connected to the faucet of the tub and having a discharge outlet, of a spray member embodying a tubular arm having a spray head at its outer end journaled at its inner end in the supply head to turn about a horizontal axis with its interior in communication with the interior of the head and adapted to be rotated to an operative position above or an inoperative position below the supply head and faucet, and a valve portion on the spray member within the head for closing the discharge outlet thereof when the spray member is in operative position.

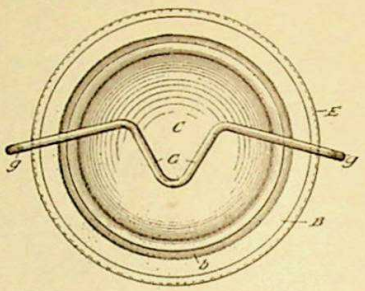
3. In a bath spray attachment, the combination with a supply head having a nipple at the top adapting it for attachment to a bath faucet, a discharge outlet below and an intervening horizontal transverse valve chamber, of a valve member rotatable in the chamber to open and close the discharge outlet and a vertically swinging spray arm having an elevated operative position and a lowered inoperative position, and communicating with the head through the valve member, said spray arm being connected to the latter to actuate the same when the spray member is moved between the said positions.

4. In a bath spray attachment, the combination with a supply head having a nipple at the top adapting it for attachment to a bath faucet, a discharge outlet below and an intervening horizontal transverse valve chamber, of a tubular yoke shaped member constituting a pair of connecting spray arms communicating with the head and adapted to adjustably assume a raised operative position above the head or a lowered inoperative position below the head, and a valve member constituting the connecting portion of the yoke and rotatable horizontally in the valve chamber of the head to open and close the discharge outlet with the adjusting movements of the spray arms.

5. The combination with a bath tub having a faucet in a wall thereof, and a supply head communicating with the faucet, of a rigid spray arm communicating with and journaled in the head and adapted to swing upon a fixed center between a raised operative position above the faucet and a lowered inoperative position within the tub below the faucet.

[Claim 6 not printed in the Gazette.]

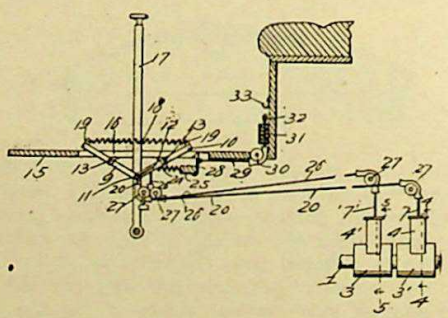
1,203,875. FOOD-PRESERVING CONTAINER. JOHN G. HODGSON, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 18, 1914. Serial No. 819,362. (Cl. 220—61.)



1. The wire spring can-cover holder made with hooked ends adapted to engage the can body on its vertical sides, at various heights according to the pressure applied and irrespective of the can end or body flange, with a biting engagement, and formed with a laterally extended bent portion to engage and press down on the cover.

2. The wire spring can-cover holder made with hooked ends adapted to engage the can body and a laterally extended and downwardly bent spring portion to engage and press down on the cover, in combination with the can, its cover and a packing between the cover and can, the upward pressure of the cover on the downwardly bent portion of the holder acting to force the hooked ends against the sides of the can with a biting engagement and at various heights according to the pressure applied and irrespective of the can end or body flange.

1,203,876. BACK-STOP BRAKE FOR AUTOMOBILES. LEVI HORNOR, Wichita, Kans. Filed June 1, 1916. Serial No. 101,118. (Cl. 21—8.)



1. In a mechanism of the character described, a rotatable member, a dog mounted for movement into and out of engagement with said member, a second member hingedly connected with the dog to bear against the first mentioned member whereby the rotation of the first mentioned member in one direction moves the dog to inoperative position.

2. In a mechanism of the character described, a rotatable toothed collar, a toothed dog mounted for sliding movement into and out of engagement with said collar, a bearing hingedly connected with the dog to swing toward and away from the collar, and a pinion journaled to the bearing and adapted to engage the teeth of the collar, said bearing when swung toward the collar serving as a prop to hold the dog separated from the collar.

3. In a mechanism of the character described, a rotatable toothed collar, a toothed dog mounted for sliding movement into and out of engagement with said collar, a bearing hingedly connected with the dog to swing

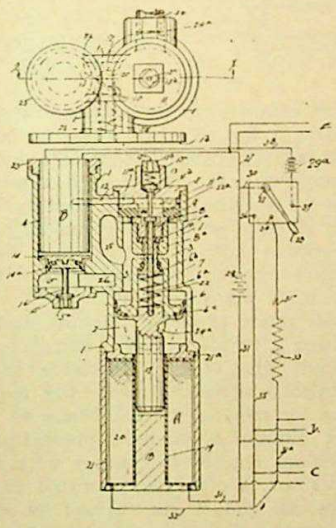
toward and away from the collar, a pinion journaled to the bearing and adapted to engage the teeth of the collar, said bearing when swung toward the collar serving as a prop to hold the dog separated from the collar, means tending to swing said bearing toward the collar, means for swinging the bearing away from the collar, and means for moving the dog away from the collar.

4. The combination with movable means of an automobile and a gear shift lever, of means for stopping said means, a device operated by said lever when moved from neutral to its other positions for holding the stopping means in inoperative position, and manually releasably means to hold the holding means when operated by said lever.

5. The combination with a movable member and a gear shift lever of an automobile, of a dog engageable with said member for stopping it, a pair of oppositely disposed U-shaped levers fulcrumed between their bends and terminals and having their terminals engaged with one another, said U-shaped levers surrounding the gear shift lever and being so arranged that the gear shift lever in being moved to different positions will engage the bends of said U-shaped levers to swing them, means operatively connecting said U-shaped levers and the dog to move the dog to inoperative position when said U-shaped levers are swung by the gear shift lever, and a releasable catch for holding said U-shaped levers when moved by the gear shift lever.

[Claims 6 to 8 not printed in the Gazette.]

1,203,877. ELECTROMAGNETIC AIR-BRAKE. EDWARD R. HUMPHREY, Victoria, British Columbia, Canada, assignor to Safety First Air Brake Company (Canada) Limited, Victoria, Canada. Filed Sept. 23, 1914. Serial No. 863,066. (Cl. 188—4.)



1. In a device of the class described, the combination with an air-brake system for trains which includes triple valves which embrace piston valves, of dual means for controlling the triple valves of the system, each of said dual means being operable independently of the other, and including solenoid magnets.

2. In a device of the class described, the combination with an air-brake system for trains which includes triple valves which embrace connected valves, including a piston valve and a secondary piston valve and a piston, of dual means for controlling the triple valves of the system, each of said dual means being operable independently of the other, said means including a pin which is fixed to the said piston valve and slidable with respect to the piston and said secondary piston valve, and a spring which holds the secondary piston valve normally seated with respect to the said piston valve, and which also holds the secondary piston valve seated with respect to the said piston.

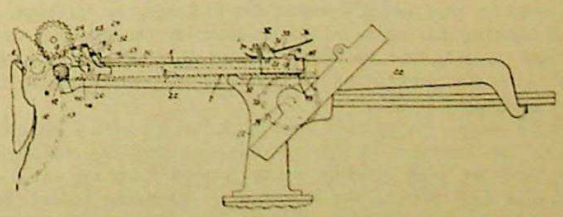
3. In a device of the class described, the combination with an air-brake system for trains which includes triple valves which embrace connected valves, including a piston valve and a secondary piston valve and a piston, of dual means for controlling the triple valves of the system, each of said dual means being operable independently of the other, said means including a pin which is fixed to the said piston valve and slidable with respect to the piston and secondary piston valves, and a spring which holds the secondary piston valve normally closed with respect to the said piston valve, and which also holds the said secondary valve closed with respect to the piston, whereby the simultaneous operation of the piston valve and secondary of the said valves effects a light or service application and a similar operation of all of the said valves effects an emergency application.

4. In a device of the class described, the combination with an air-brake system for trains which includes triple valves, which embrace connected valves, including a piston valve and a secondary piston valve and a piston, of dual means for controlling the triple valves of the system, each of said dual means being operable independently of the other, said means including a pin which is fixed to the said piston valve and slidable with respect to the said secondary piston valve and piston, and a spring which holds the secondary piston valve normally closed with respect to the piston valve, and which also holds the secondary piston valve closed with respect to the piston, a casing secured to the triple valve body, a magnet within the said casing, the plunger of said magnet being integral with the said piston valve, whereby when the said plunger is attracted to its magnet an emergency application is effected.

5. In a device of the class described, the combination with an air-brake system for trains which includes triple valves, which embrace connected valves, including a piston valve and a secondary piston valve and a piston, of dual means for controlling the triple valves of the system, each of said dual means being operable independently of the other, said means including a pin which is fixed to the said piston valve and slidable with respect to the piston and secondary piston valve, and a spring which holds the secondary piston valve normally closed with respect to the said piston valve, a casing secured to the triple valve body, a magnet within the said casing, the plunger of said magnet being integral with the said piston valve, there being a greater force required to cause an emergency than a light application, means for producing such variation of force, including a plurality of interdependent and normally open electrical circuits, a resistance coil in one of the said circuits and a switch for completing either of said circuits.

[Claims 6 and 7 not printed in the Gazette.]

1,203,878. DELIVERY MECHANISM FOR PRINTING-PRESSES. WINFIELD S. HUSON, Derby, and CHRISTEN R. KADDELAND, Shelton, Conn., assignors to The Whitlock Printing Press Mfg. Co., Derby, Conn., a Corporation. Filed Mar. 13, 1916. Serial No. 83,759. (Cl. 101—31.)



1. In a multi-stage delivery mechanism for printing presses, the combination with a reciprocating tape-carriage mounting intermittently actuated extensible tapes, or sheet-justifying means carried by the said carriage and positioned thereupon to co-act with the on-coming sheet preparatory to the advancement of the said sheet to its next position on the said tapes.

2. In a multi-stage delivery mechanism for printing presses, the combination with a reciprocating tape-carriage mounting intermittently actuated extensible tapes, of sheet-justifying means mounted upon the said carriage at the inner end thereof and arranged to co-act with the on-coming sheet to retard and justify the same preparatory to the advancement of the said sheet to its next position on the said tapes.

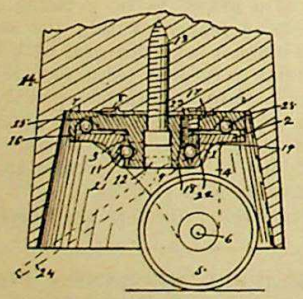
3. In a multi-stage delivery mechanism for printing presses, the combination with a reciprocating tape-carriage, of tapes actuated by the said carriage on the out-stroke thereof, and sheet-justifying means mounted upon the said carriage and movable between the tapes so as to act in the plane of the on-coming sheet to retard and justify the same preparatory to the advancement of the said sheet to its next position on the said tape-carriage.

4. In a multi-stage delivery mechanism for printing presses, the combination with a reciprocating tape-carriage, of extensible tapes therefor intermittently actuated by the movement thereof, and rocking sheet-stop fingers carried by the said carriage and adapted to be moved downward between the said tapes into the path of the on-coming sheet preparatory to the advancement of the said sheet to its next position on the said tapes, and the said fingers being lifted above the said tapes during the return movement of the carriage.

5. In a multi-stage delivery mechanism for printing presses, the combination with a reciprocating tape-carriage, of extensible tapes applied to the said carriage, a rock-shaft mounted upon the carriage, and sheet-stop fingers mounted upon the said shaft and adapted to be rocked downward between the tapes into the path of the on-coming sheet preparatory to the advancement of the said sheet to its next position on the said tapes and the said fingers being rocked upward above the said tapes to clear the sheet on the return movement of the said carriage.

[Claims 6 to 17 not printed in the Gazette.]

1,203,879. CASTER. FRANZ JANZEN, Hamilton, Ohio, assignor of one-third to Edward T. Malloy and one-third to George J. Kalberer, Hamilton, Ohio. Filed July 28, 1916. Serial No. 111,818. (Cl. 16—73.)



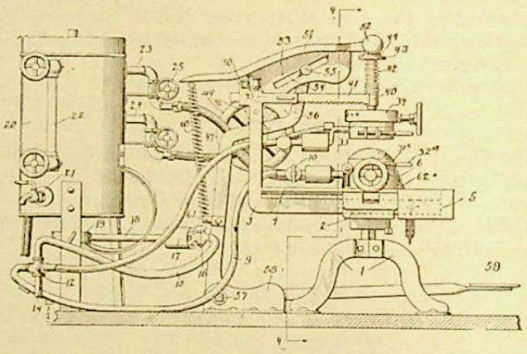
1. A caster comprising a housing formed with a vertical opening therethrough, a plate formed with a stem depending within the opening, said stem and plate being formed with an axial opening having its lower portion enlarged and angular in cross section, a screw movably secured in said axial opening for the purpose specified, a ball bearing for supporting the plate on the housing, and a ball bearing for resisting lateral thrusts on the stem and also for preventing its removal from the opening in the housing.

2. A caster comprising a housing formed with a circular plane top surface having an axial opening therethrough, the wall of said opening being formed with an annular channel and with a vertical groove extending therefrom, a top plate formed with a stem depending through said opening and with a concentric channel in its lower surface, anti friction balls movable within said channel for supporting the top plate above the housing, said stem being formed with an annular channel in registration with the channel in the opening in the housing and also with a vertical groove extending therefrom adapted to register with the former groove and terminating in a circular opening through the top plate, and anti friction balls admitted through said opening and grooves to the registering channels for preventing the removal of the stem and for resisting lateral thrusts thereon.

3. A caster comprising a housing formed with a circular vertical opening, a top plate formed with a stem depending within the opening, a ball bearing for supporting the plate on the housing, a ball bearing encircling the stem within the opening, said stem and plate being formed with an axial opening therethrough having an enlarged and angular lower portion and a lag screw movably secured in said axial opening for securing the caster to an article of furniture.

4. A caster comprising a housing formed with a circular plane top surface with an exial opening therethrough, a plate formed with a stem depending within said opening, a ball bearing for supporting the plate above said plane surface, and a ball bearing encircling the stem within the opening and arranged to prevent its removal therefrom.

1,203,880. STEAM-PRESSING MACHINE. MEYER M. KANE, Chicago, Ill. Filed Dec. 27, 1915. Serial No. 68,888. (Cl. 68—9.)



1. A combination steam pressing machine and ironing apparatus comprising a frame, steam pressing boxes, one box positioned above the other, adjustable rack bars, bosses thereon, supports upon the upper box mounted in said boxes, means for moving the rack bars to hold the upper press box in different positions, a pivotal plate having projecting portions adapted to contact with said supports for the upper box, and an angle lever adapted to actuate said depressible plate.

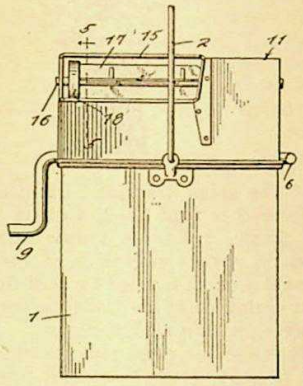
2. A combination steam pressing machine and ironing apparatus comprising a frame, steam pressing boxes, one box positioned above the other, adjustable rack bars, bosses thereon, supports upon the upper box mounted in said bosses, means for moving the rack bars to hold the upper press box in different positions, a pivotal plate having projecting portions adapted to contact with said supports for the upper box, a pivotally mounted angle lever with a tread upon one end, a pin carried by said lever and movable in a slot in the shank portion of said plate, the latter being adapted to contact with the supports for the upper box.

3. A combination steam pressing machine and ironing apparatus comprising a frame, steam pressing boxes, one box positioned above the other, adjustable rack bars, bosses thereon, supports upon the upper box mounted in said bosses, means for moving the rack bars to hold the upper press box in different positions, a pivotal plate having projecting portions adapted to contact with said supports for the upper box, a pivotally mounted angle lever with a tread upon one end, a pin carried by said lever and movable in a slot in the shank portion of said plate, the latter being adapted to contact with the supports for the upper box, and a spring fastened at one end to one end of said plate and its other end to said lever.

4. A combination steam pressing machine and ironing apparatus comprising a frame, steam pressing boxes, means for adjusting the upper box to different positions, rack bars, bosses carried thereby and in which said sup-

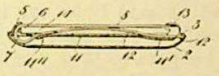
ports are mounted, gear mechanism for actuating said rack bars, a pivotal plate mounted upon the frame, a pivotal angle lever having a tread thereon, a pin carried by said lever, a slot in the plate in which said pin works, and a spring connected at one end to the plate and the other end to the lever.

1,203,881. ASH-SIFTER. JOHN G. KING, Burlington, N. C. Filed Sept. 13, 1915. Serial No. 50,443. (Cl. 83—60.)



An ash sifter comprising a receptacle, a cover for the receptacle, a sieve rotatably supported by the receptacle, said cover having a throat projecting from one side thereof, a fan shaft rotatably supported by the cover and adjacent the throat, a disk fixed to the fan shaft and engaged with the sieve to rotate the fan shaft, as and for the purpose set forth.

1,203,882. BROOCH. CLIFFORD G. KING, Providence, R. I. Filed Apr. 3, 1912. Serial No. 688,217. (Cl. 24—161.)



1. In a pin, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, said lower arm being provided with an enlarged bearing surface for the fabric, a plate, pin-point-retaining means near one end of said plate and a stop near the other end thereof, the lower arm of said pin-tongue being upwardly bowed and constituting a spring-bridge for maintaining said upper arm when released from said retaining-means under tension against said stop.

2. In a pin, a pin-tongue of spring material bent upon itself and comprising an upper and lower arm, the middle portion of said lower arm being bent into a spiral, a plate, pin-point-retaining means near one end of said plate and a stop near the other end thereof, the lower arm of said pin-tongue being upwardly bowed and constituting a spring-bridge for maintaining said upper arm when released from said retaining means under tension against said stop.

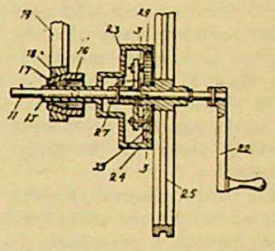
3. In a pin, a front-plate having a hood and pin-point-retaining means formed integral with the opposite ends thereof, a pin-tongue of spring material bent upon itself and comprising an upper and lower arm, the lower arm of said pin-tongue being provided with an enlarged bearing surface for the fabric and constituting a spring-bridge for maintaining said upper arm when released from said pin-point-retaining means under tension against said hood.

4. In a pin, a front-plate having a hood and pin-point-retaining means formed integral with the opposite ends thereof, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, the middle portion of said lower arm being formed into a spiral and said lower arm constituting a spring-bridge for maintaining said upper arm when released from said pin-point-retaining means under tension against said hood.

5. In a pin, a front-plate having a hood and pin-point-retaining means formed integral with the opposite ends thereof, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, the bent portion of said pin-tongue being arranged within said hood, and the end of said lower arm being secured to said front-plate at the end of the latter which forms pin-point-retaining means.

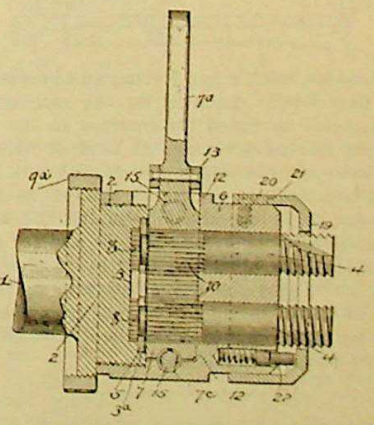
[Claims 6 to 10 not printed in the Gazette.]

1,203,883. GEARING DEVICE FOR WASHING-MACHINES. GEORGE W. LEWIS, Grinnell, Iowa. Filed Dec. 8, 1913. Serial No. 805,461. (Cl. 74—34.)



A device of the class described, comprising a support, a power shaft, two brackets fixed to the support and each having a hollow body portion near its upper end through which the power shaft is extended, a bearing device at one end of the power shaft pivotally mounted within one of the said brackets, a gear casing carried by said bearing, a second bearing within the other bracket pivotally supported therein, a gear casing carried by said second bearing and having an internal gear, a hub fixed to the power shaft within the latter gear casing, pinions carried by said hub in mesh with the internal gear, and a balance wheel loose on the power shaft and having a pinion in mesh with the pinions on the fixed hub, for the purposes stated.

1,203,884. COLLAPSIBLE TAP OR DIE. ROLLIN C. LEWIS, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Nov. 16, 1915. Serial No. 61,809. (Cl. 10—143.)



1. In a tool for forming screw threads, the combination of a body, a plurality of chasers carried by said body and located equidistant from the periphery thereof, each chaser being cylindrical in form and having a cutting edge and a flat face adjacent the cutting edge, a gear wheel fixed against movement parallel to the long axis of the tool and meshing with teeth on the series of chasers for turning them simultaneously in the same direction, a spring normally tending to turn said gear wheel, means for holding the wheel against the tension of the spring, and means for releasing the wheel holding means.

2. In a tool for forming screw threads, the combination of a body, a plurality of chasers carried by said body, a

gear wheel meshing with teeth on the chasers for rotating all of the chasers simultaneously in the same direction, the said gear wheel being fixed against movement parallel to the long axis of the tool, means for holding the gear against rotary movement, and means actuated by contact with the work being screw threaded to release said holding means, thus permitting the gear to turn the several chasers in a direction to disengage them from the work.

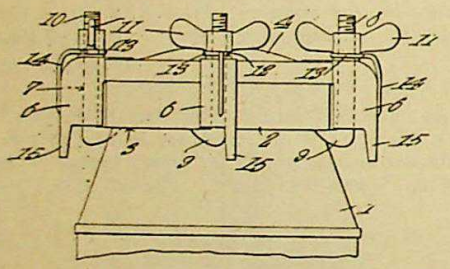
3. In a tool for forming screw threads, the combination of a body, a plurality of chasers carried thereby, each having a peripheral groove at its inner end, holding means engaging the grooves in the chasers for locking them in the body, a gear wheel fixed against movement in the direction of the long axis of the tool and engaging teeth on the several chasers for rotating the latter simultaneously, and means for rotating said gear wheel.

4. In a tool for forming screw threads, the combination of a body, a series of chasers mounted to rotate in said body and projecting at one end from the latter, each chaser having a peripheral groove at its inner end, a sectional disk engaging the peripheral grooves in the chasers for locking them to the body, and means for turning the chasers.

5. In a tool for forming screw threads, the combination of a body, a series of chasers mounted to rotate in said body, each chaser having a peripheral groove at its inner end, a sectional disk engaging the said grooves for locking the chasers to the body of the tool, the said disk sections adapted to be moved toward and away from the periphery of the body for releasing and locking the chasers, and means for rotating the latter.

[Claims 6 to 16 not printed in the Gazette.]

1,203,885. FASTENING DEVICE. CHARLES E. LOMBARD, East Wilton, Me. Filed Nov. 11, 1915. Serial No. 60,930. (Cl. 70—3.)

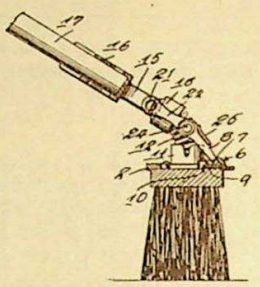


The combination with a can having an annular shoulder, of a cover detachably mounted on the can, outstanding ears thereon, bolts mounted for rotation in the respective ears, each bolt having a segmental head at its lower end, a nut threaded upon the upper end of each bolt, means for holding each nut against the top of the ear, each nut constituting means for successively swinging the head of its bolt into engagement with the shoulder and for tightening said head against the shoulder, thereby to bind the cover upon the can, and a stop depending from each ear for limiting the rotation of the adjacent head away from the shoulder, said head being movable into engagement with the shoulder at any desired point therealong.

1,203,886. BRUSH AND BROOM HANDLE. ARTHUR D. LONG, Fairfield, Iowa. Filed Jan. 28, 1916. Serial No. 74,804. (Cl. 15—24.)

1. In a device of the class described the combination with a brush head, a handle, of a frame secured to said brush head, said frame provided with spring receiving sockets at its respective ends, a frame secured to said handle, and means carried by said frame secured to said handle and yieldably connected to said spring receiving sockets for yieldably holding said handle in engagement with said frame.

2. In a device of the class described the combination with a brush head, a handle, of a frame secured to said brush head, said frame provided with spring receiving sockets at its respective ends, a frame secured to said handle, means carried by said frame secured to said handle and yieldably connected to said spring receiving sockets for yieldably holding said handle in engagement with said frame, and means for locking said handle at a rigid angle with respect to said head.



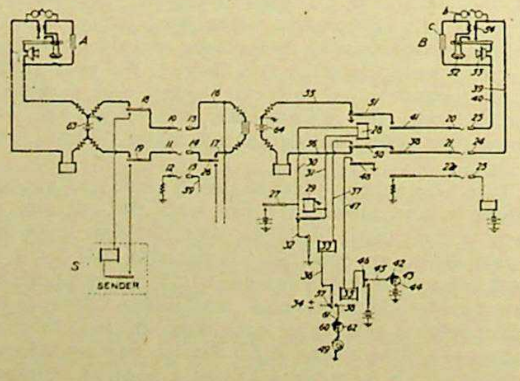
3. A device of the class described comprising a brush head, a handle secured to said head, a plurality of sockets carried by said frame, a handle frame secured to said handle and provided with a plurality of sockets adapted to register with said sockets carried by said first-mentioned frame, and a coil spring positioned within each socket and being secured thereto within said sockets.

4. A device of the class described comprising a broom head, a frame secured to said broom head and provided with a socket near each end thereof, said frame provided with a notch upon the under face thereof adjacent each socket, a coil spring fitting within each socket and provided with a projecting end fitting in said notch, a handle frame provided with a plurality of sockets adapted to register with said first mentioned sockets, said coil springs fitting in said sockets of said handle frame, and a transversely extending pin carried by each socket of said handle frame for fixedly securing said coil springs within said sockets of said handle frame.

5. A device of the class described comprising a broom head, a handle frame, a pair of pivotally connected links secured to said handle frame and broom head respectively, and means carried by said links for limiting the outward swing in one direction and adapted to hold said handle at an angle with respect to said head when said links are forced outwardly.

[Claims 6 to 9 not printed in the Gazette.]

1,203,887. MACHINE-SWITCHING TELEPHONE-EXCHANGE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 27, 1915. Serial No. 52,880. (Cl. 179—18.)



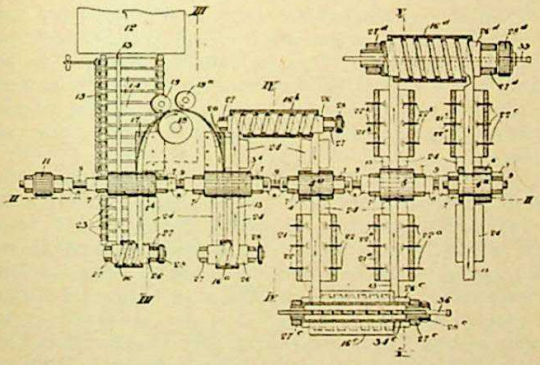
1. In a telephone exchange system, the combination with telephone lines, a connector wherein said lines terminate, and means for setting said connector on said lines, of a relay, a source of current and an interrupter for operating the same, two sources of ringing current controlled by said relay, electromagnetic means adapted to operate when the connector is set on the called line and

to connect one or the other source in circuit with the called line dependent upon the condition of said relay, and means for cutting off the ringing current when the called party answers.

2. In a telephone exchange system, the combination with telephone lines, a connector wherein said lines terminate, means for setting said connector on said lines, a relay, a source of current and an interrupter for operating the same, a source of continuous ringing current connected to the back contact of said relay, a source of interrupted ringing current connected to the front contact of said relay, electromagnetic means adapted to operate when said connector is set on the called line to connect one or the other of said ringing current sources to the called line dependent upon the condition of said relay, and means for cutting off the ringing current when the called party answers.

3. In a telephone exchange system, the combination with telephone lines, a connector wherein said lines terminate, and means for setting said connector on said lines, a relay, a source of continuous ringing current connected to the back contact of said relay, a source of interrupted ringing current connected to the front contact of said relay, a source of current and an interrupter adapted to operate said relay, said interrupter being adapted to operate said relay only when said source of ringing current is closed to the front contact of said relay, electromagnetic means adapted to operate when said connector is set on the called line to connect the armature of said relay and the ringing current source at that moment connected thereto to the called line, and means for cutting off the ringing current when the called party answers.

1,203,888. CONTINUOUS ROLLING-MILL. JOHN B. MCKIBBIN, Crafton, Pa., assignor of three-eighths to Edmonds J. Sugden, Pittsburgh, Pa. Filed Mar. 12, 1915. Serial No. 13,854. (Cl. 80—37.)



1. In combination with two stands of rolls of a continuous train, a pair of curved spiral guideways extending beyond each set adapted to guide the blank from a horizontal toward a vertically edgewise position and vice versa, and a set of vertically arranged guiding rolls arranged between the outer terminals of said guideways whereby the blank is taken from one set of rolls, reversed as to its plane of moving position from horizontal to vertically edgewise and then from vertically edgewise to horizontal, and is then curved around and introduced into the adjacent stand.

2. In a rollingmill, the combination of a series of continuously driven axially connected main rolls, of a curved guiding track adapted to receive a blank horizontally from one stand of rolls and turn it on edge, vertically arranged guiding rollers, and a guiding track adapted to introduce the blank horizontally to another stand of rolls.

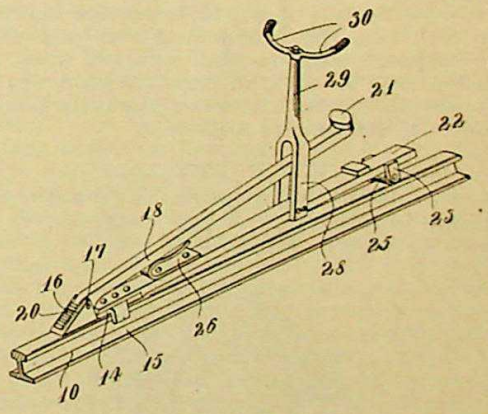
3. In a rolling mill, the combination with a continuous longitudinally connected series of main rolls and co-acting vertically arranged rolls providing a plurality of stands of rolls, of deflecting rollers arranged beyond and between the normal path of blank travel of adjacent stands, a curved spiral guideway adapted to direct the blank from a horizontal to a vertical position and to lead it from the first stand to said deflecting rollers, and a similar guideway adapted to direct the blank from a vertical to a horizontal position and to lead it from said deflecting rollers to the second stand.

4. In a rolling mill, the combination with a continuous longitudinally connected series of main rolls and co-acting companion rolls providing a plurality of stands of rolls, of an inner deflecting roller and outer deflecting rollers arranged beyond and between the normal path of blank travel of adjacent stands, a curved spiral guideway adapted to direct the blank from a horizontal to a vertical position and to lead it from the first stand to said deflecting rollers, and a similar guideway adapted to direct the blank from a vertical to a horizontal position and to lead it from said deflecting rollers to the second stand.

5. In a rolling mill, the combination with a continuous longitudinally connected series of main rolls and co-acting companion rolls providing a plurality of stands of rolls, of vertically arranged slightly tipped deflecting rollers arranged beyond and between the normal path of blank travel of adjacent stands, a curved spiral guideway adapted to direct the blank from a horizontal to a vertical position and to lead it from the first stand to said deflecting rollers, and a similar guideway adapted to direct the blank from a vertical to a horizontal position and to lead it from said deflecting rollers to the second stand.

[Claims 6 to 10 not printed in the Gazette.]

1,203,889. CAR-STARTER. JAN MALINIAK, Perth Amboy, N. J. Filed Aug. 22, 1916. Serial No. 116,220. (Cl. 254—36.)

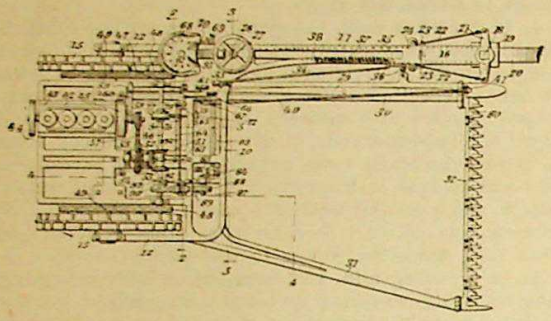


1. In a car mover, the combination with a base-plate suited to rest upon a rail, means for holding said plate in lateral engagement thereon, a lever fulcrumed on said plate, corrugations formed at the front of said lever adapted to engage with a car wheel, a spring interposed between said base-plate and said lever whereby the latter is held normally raised, and means whereby the implement may be propelled along said rail, said means also acting to steady the operator.

2. In a car mover, the combination with a base-plate embracing the head of a rail, vertical lugs formed at the front of said base-plate, a lever pivoted between said lugs, corrugations formed with the front end of said lever, a pad adapted to receive the foot of an operator formed with the rear of said lever, a bifurcated guiding means receptive of the lever, a spring disposed between said base-plate and said lever whereby the latter is held in a normally operative position and a roller mounted at the rear of said base-plate, adapted to rest upon the rail.

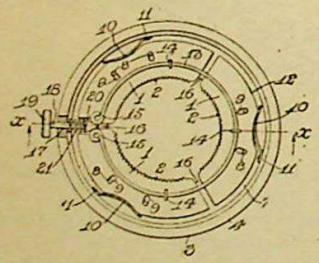
3. In a car mover, the combination with a sectional base-plate, lugs in the front section of the same adapted to engage with the side of a rail, a roller carried by the second element of said sectional base-plate, vertical lugs provided with the first named section, a lever pivoted therein, corrugations formed with said lever, a foot pad formed at the opposite end of said lever, a guide secured to the second section of said base-plate and means formed with said guide whereby said implement can be propelled.

1,203,890. MOWING-MACHINE. FRANCIS S. MANNON, Newport, Oreg. Filed May 19, 1916. Serial No. 98,641. (Cl. 56—78.)



A mowing machine including a frame, supporting wheels for said frame, cutting means carried by said frame, actuating means for said cutting means including a driven shaft, a driving shaft carried by said frame, means for transmitting rotary movement from said driving shaft to said supporting wheels, means for transmitting rotary movement from said driving shaft to said driven shaft, a clutch slidably mounted upon said driving shaft and provided with beveled gears, a second driven shaft provided with a gear extending between the gears of said clutch, means for rotating said second driven shaft, means for shifting said clutch to bring a selected gear into engagement with the gear of said last mentioned driven shaft, a brake drum carried by said driving shaft, a brake band passing around said drum, a tightening lever connected with the ends of said brake band for drawing the brake band into tight engagement with said drum, a rocker shaft rotatably connected with said frame, a link connecting said rocker shaft with said tightening lever, and means for moving said rocker shaft into and out of a position to tighten said brake band.

1,203,891. DEVICE FOR OPENING EGGS. SAMUEL MARKOWITZ, New York, N. Y. Filed Nov. 13, 1915. Serial No. 61,218. (Cl. 65—12.)



1. A device for opening eggs having the combination of an annular frame, a plurality of saws within said frame adapted to be placed over a portion of the egg, and an individual spring for each of said saws pressing its saw toward the center of said frame.

2. A device for opening eggs having the combination of an annular frame, a plurality of saws within said frame adapted to be placed over a portion of the egg, a spring for each of said saws pressing it toward the center of said frame, and means to move all of said saws apart contrary to the pressure of all of said springs.

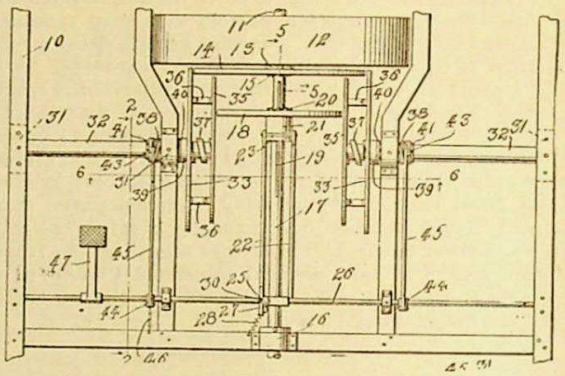
3. A device for opening eggs having the combination of an annular frame, a plurality of saws within said frame adapted to be placed over a portion of the egg, means for guiding each of said saws toward and away from the center of said ring, and a spring for each of said saws pressing it toward the center of said frame.

4. A device for opening eggs having the combination of an annular frame, a plurality of saws within said frame adapted to be placed over a portion of the egg, a spring for each of said saws pressing it toward the center of said frame, a flexible bar connecting said saws, and a stem adapted to press against the ends of said bar to move all of said saws simultaneously contrary to the pressure of their springs.

5. A device for opening eggs having the combination of an annular frame, a plurality of saws within said frame adapted to be placed over a portion of the egg, means for guiding said saws toward and away from the center of said frame, a spring for each of said saws pressing it toward the center of said frame, a bar connecting said saws, and a stem adapted to press against the ends of said bar to move all of said saws contrary to the pressure of all of said springs.

[Claims 6 and 7 not printed in the Gazette.]

1,203,892. TRANSMISSION-GEARING. ARCHIBALD J. MATHESON, Virgelle, Mont. Filed May 8, 1915. Serial No. 26,729. (Cl. 74—26.)



1. In a transmission gearing, the combination with a pair of friction wheels, of a hollow shaft, a friction disk secured thereto, a shaft extending through said hollow shaft, a relatively smaller friction disk secured thereto, a coil spring for moving said disks apart, links for limiting said movement, a bearing for said hollow shaft having threads therein, a threaded sleeve mounted in said bearing and arranged to bear against the first-mentioned friction disk and means for turning said sleeve to move the disks into and out of engagement with the said wheels.

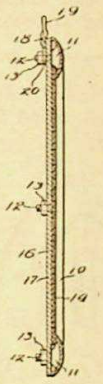
2. In a transmission gearing, the combination with a pair of friction wheels, of a hollow shaft, a friction disk secured thereto, a shaft extending through said hollow shaft, a relatively smaller friction disk secured thereto, a coil spring for moving said disks apart, links for limiting said movement, a bearing for said hollow shaft having threads therein, a threaded sleeve mounted in said bearing and arranged to bear against the first-mentioned friction disk and a rock arm on said sleeve, a link connected at one end to said rock arm and an operating lever fulcrumed in spaced relation to the sleeve and having the remaining end of the link connected thereto.

1,203,893. PICTURE-FRAME. CLAUDE E. MILLICAN, Rome, Ga. Filed July 26, 1915. Serial No. 42,054. (Cl. 40—156.)

1. A frame provided with enlargements forming abutments and having threaded bolts extending therefrom, abutment pins extending from the frame, a glass positioned in said frame and engaging said abutment lugs and pins whereby said glass will be held in the proper position, a backing plate placed against said frame and provided with openings through which said bolts pass, and securing nuts carried by said bolts to hold said backing plate in place.

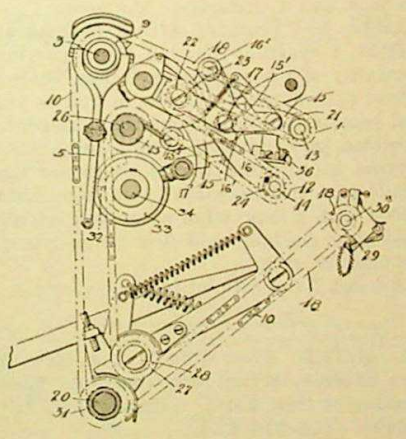
2. A frame having enlargements extending from its inner face to form abutments, securing bolts extending from said enlargements, abutment pins extending from the inner face of said frame, a backing plate provided with openings through which said bolts pass, and securing means carried by said bolts to releasably hold said backing plate in place.

3. A frame, abutments extending from the inner face of said frame, a backing plate fitting against said frame, threaded stems extending from said frame through said backing plate, a hanger formed of wire twisted to form upper and lower eyes, the lower eye being mounted upon one of said threaded stems, and securing nuts screwed upon said stems to hold said backing plate and hanger in position.



4. A frame, a backing plate for said frame, stems extending from said frame through said backing plate, a hanger provided with an eye through which one of said stems passes, and securing means engaging said stems for releasably holding said hanger and backing plate in position.

1,203,894. FEED-ROLL CLUTCH. JOHN F. MILLIGAN, New York, N. Y., assignor to Automatic Coinwrapping Company, a Corporation of New York. Filed Feb. 17, 1915. Serial No. 8,949. (Cl. 93—2.)

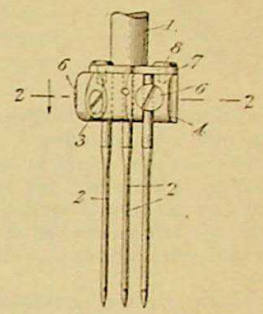


1. In a coin handling machine, the combination with coin stacking mechanism of coin wrapping mechanism comprising a plurality of wrapping rolls, means for positively driving said rolls, a clutch connection between said driving mechanism and said wrapping roll and means controlled from the stacking mechanism to strip said clutch into an outer operating position.

2. In a coin handling machine, the combination with coin counting and stacking mechanism, coin wrapping mechanism including a plurality of wrapping rolls, driving connections for said rolls, a clutch connection between the driving mechanism and said rolls and means controlled by the stacking of the last coin of a stack for tripping said clutch mechanism into operative positions.

3. In a coin handling machine, the combination with a coinstacking mechanism and coin wrapping mechanism including a plurality of wrapping rolls, means for driving said roll, a clutch connection between said driving means and said rolls, a cam controlling said clutch connection, said cam being so constructed as to trip the roll driving mechanism into operation when a stack of coins is presented thereto, but to throw said driving mechanism out of operation upon the completion of the wrapping of the stack.

1,203,895. NEEDLE-CLAMP FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 11, 1911. Serial No. 664,972. (Cl. 112—37.)



1. In combination with the needle bar, a collar clamped thereon having recesses for the needle shanks, recesses extending horizontally into said collar arranged at an angle to a line joining the needles, and clamping screws secured in said recesses and bearing upon said shanks, and a plate on top of said collar and secured thereto against which the upper ends of the shanks abut.

2. In combination with the needle bar, a collar clamped thereon having recesses for the needle shanks, recesses extending horizontally into said collar arranged at an angle to a line joining the needles, clamping screws secured in said recesses and bearing upon said shanks, and a plate on top of said collar and secured thereto, against which the upper ends of the shanks abut, said needle bar having a central vertical recess to receive the shank of a needle, and a screw having its inner end threaded through the needle bar and bearing on said shank.

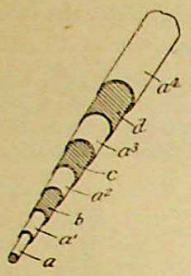
3. The combination of a needle bar having a vertical recess in its lower end for the reception of a shank of a needle, a needle clamping collar on the lower end of the needle bar, means for clamping the shank of the needle in the recess in the needle bar, means for clamping said collar to said needle bar, said clamping collar being provided with needle holding recesses upon opposite sides of the needle bar, clamping devices for holding the needles in said recesses, said clamping devices being arranged so as to operate at an angle to a line joining the needle recesses and a plate on top of said collar and secured thereto against which the upper ends of the shanks of the needles passing through the clamping collar abut.

4. In combination, a needle bar having a vertical recess in its lower end for the reception of the shank of a needle, a needle clamping collar on the lower end of the needle bar, means for clamping the shank of the needle in the recess of the needle bar, an oppositely disposed screw for holding the needle clamping collar to the needle bar, said clamping collar being provided with needle-holding recesses upon opposite sides of the needle bar, and clamping devices for holding said needle in said recesses, said clamping devices being arranged horizontally and operating at an angle to a line joining the needle recesses.

1,203,896. COVERING MATERIAL FOR FURNITURE, &c., AND METHOD OF MAKING SAME. HAROLD B. MORRIS, Glendale, Cal. Original application filed Oct. 11, 1915, Serial No. 55,309. Divided and this application filed Feb. 11, 1916. Serial No. 77,605. (Cl. 28—5.)

1. A cord for covering frames of different articles, comprising a core of fibrous material treated with adhesive, a covering for the core made of fibrous material which is colored and which is treated with adhesive material, and another cover superposed on that first mentioned having the same color scheme united to the first-mentioned cover

by adhesive and which is treated with adhesive waterproofing material.



2. A cord for covering frames of different articles, comprising a core treated with adhesive, a covering for the core made of fibrous material which is colored and which is treated with adhesive material, and another cover superposed on that first mentioned having the same color scheme united to the first-mentioned cover by adhesive and which is treated with adhesive waterproofing material.

3. A cord for covering frames of different articles, comprising a core treated with adhesive material and colored, a covering for the core made of fibrous material united to the core by the adhesive and which has the same color scheme as the core whereby when the cover wears away and the core is exposed the same color scheme will be preserved.

4. The method herein-described of forming a covering cord consisting in first forming a core of flexible fibrous material, treating said core with adhesive material, applying thereto a covering of colored fibrous material, treating said cover with adhesive water-proofing material, applying to said first cover a second cover of colored fibrous material similar in color scheme to the first cover, and then treating the outer cover with adhesive water-proofing material.

5. The method herein-described of forming a covering cord, which consists in treating a covering cord, which consists in treating a core with adhesive material, allowing said material to dry, softening said material, applying thereto a covering of colored fibrous material, treating said cover with adhesive material, allowing said material to dry, subsequently softening the dried material, applying to said first cover a second cover of colored fibrous material similar in color scheme to the first cover, and then treating the outer cover with finishing adhesive material.

1,203,897. PROCESS OF GRAVITY LIQUID SEPARATION OF IRON ORES. ARTHUR J. MOXHAM, Wilmington, Del. Filed Mar. 25, 1914. Serial No. 827,074. (Cl. 83—85.)

1. The hereinbefore described process of concentrating those iron ores which are adapted to be changed in composition by heat, which consists in calcining the ore without reduction of the oxid therein, and then subjecting the ore to a gravity separating action in a liquid containing one or more ingredients decomposable by reduced ore.

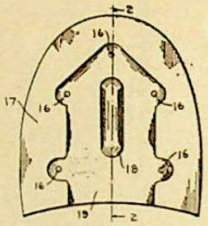
2. The hereinbefore described process of concentrating those iron ores which are adapted to be changed in composition by heat, which consists in heating the ore while avoiding contact therewith of gases capable of deoxidizing the ore, and then subjecting the ore to a gravity separating action in a liquid containing one or more ingredients decomposable by reduced ore.

3. The hereinbefore described process of concentrating those iron ores which are adapted to be changed in composition by heat, which consists in subjecting the ore to neutral calcination and then subjecting the calcined ore to a gravity separating action in a liquid containing one or more ingredients decomposable by reduced ore.

4. The hereinbefore described process of concentrating those iron ores which are adapted to be changed in composition by heat, which consists in subjecting the ore to neutral calcination and then subjecting the calcined ore to a gravity separating action in a liquid heavier than water and containing one or more ingredients decomposable by reduced ore.

5. The hereinbefore described process of concentrating those iron ores which are adapted to be changed in composition by heat, which consists in subjecting the ore to neutral calcination and then subjecting the calcined ore to a gravity separating action in a liquid of a specific gravity substantially higher than that of the silicious constituent of the ore and containing one or more ingredients decomposable by reduced ore.

1,203,898. PNEUMATIC-CUSHION HEEL. OSCAR MUSSINAN, New York, N. Y. Filed Feb. 9, 1916. Serial No. 77,231. (Cl. 36—35.)



1. A cushion heel provided with a peripherally located tread portion, a centrally located tread portion extending outside the plane of said first named portion, a recess intermediate said tread portions, and a pneumatic chamber.

2. A cushion heel provided with a peripherally located tread portion, a centrally located tread portion, a recess intermediate said tread portions, and a pneumatic chamber provided with a depression extending within said central portion.

3. A cushion heel provided with a peripherally located tread portion, a centrally located tread portion provided with a plurality of projections, a recess intermediate said tread portions and a pneumatic chamber.

4. A cushion heel provided with a peripherally located tread portion, a centrally located tread portion provided with a plurality of projections extending below the plane of said first named tread portion, a recess intermediate said tread portions, and a pneumatic chamber.

5. A cushion heel provided with a peripherally located tread portion, a centrally located tread portion, a recess intermediate said tread portions, and a pneumatic chamber provided with a depression extending within said second named tread portion, said depression being surrounded by an annular ridge.

[Claims 6 and 7 not printed in the Gazette.]

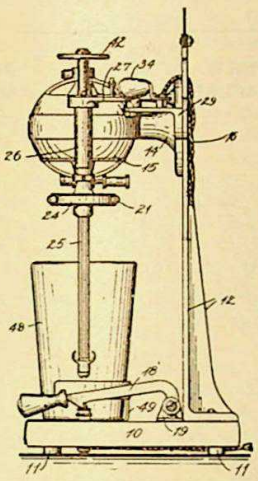
1,203,899. MIXER. FREDERICK MYERS, New York, N. Y., assignor to Fred Myers Mfg. Co., New York, N. Y., a Corporation of New York. Filed Oct. 1, 1915. Serial No. 53,496. (Cl. 31—63.)

1. In a beater, a pair of spindles having beaters at their lower ends, means for frictionally rotating either or both of said spindles, means for adjusting said spindles vertically, means for maintaining said spindles in an adjusted position and means for moving said spindles laterally with respect to the driving means.

2. In a beater, the combination with a base, a stand rising therefrom and a motor vertical on said stand, of a pair of spindles having beaters at their lower ends, wheels on said spindles adapted to be frictionally driven by said motor, means for keeping said wheels normally in engagement with said motor, and levers for disengaging said wheels therefrom.

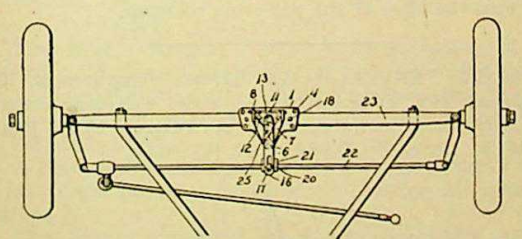
3. In a beater, the combination with a base, a stand rising therefrom and a motor vertical on said stand, of a pair of spindles having beaters at their lower ends, wheels on said spindles adapted to be frictionally driven by said motor, means combined with said wheels for transmitting rotary motion to said spindles, said means also acting as wipers therefor, and means for raising or lowering said spindles independently of said wheels.

4. In a beater, the combination with a base, a stand rising therefrom and a motor vertical on said stand, of a pair of spindles having beaters at their lower ends, wheels on said spindles adapted to be frictionally driven by said motor, levers for actuating said wheels into and out of engagement with said motor, a removable tension means between said spindles, means for holding said spindles at and desired height when rotating or quiescent, and a manually operated means for raising or lowering said spindles, said means being non-rotatable while in the grasp of the operator.



5. In a beater, a pair of spindles having beaters at their lower ends, means for frictionally rotating either or both of said spindles, levers upon which said spindles are mounted, means for constraining said levers normally toward each other, means whereby said constraining means may be released, means for operating said levers whereby said spindles may be positively moved to or from the driving means, means for raising and lowering said spindles and means for wiping said spindles as they are raised.

1,203,900. STEERING-GEAR ATTACHMENT. THOMAS J. NASH, Lincoln, Nebr., assignor to American Aluminum Ware Company, Lincoln, Nebr. Filed Apr. 5, 1915. Serial No. 19,254. (Cl. 21—200.)



1. In a steering mechanism attachment, a plate, means for securing the same to the axle of a vehicle, an operating lever pivoted to the plate, means for securing said lever to the connecting rod of the steering mechanism of a vehicle, a pair of buffer levers pivoted to said plate, a stud on said operating lever located at a place between the pivot locations of said operating lever and of said buffer levers a spring for holding said buffer levers against said stud, and stops for limiting the movement of said buffer levers.

2. In a steering mechanism attachment, a plate, clamps to secure said plate on a vehicle axle, an operating lever pivot stud secured to the plate, an operating lever pivoted on said stud and projecting beyond said plate, a device for connecting said operating lever to the connecting rod of the steering mechanism of a vehicle, a pair of buffer levers, a buffer lever pivot stud on said plate, a stud on said operating lever to engage said buffer levers and located between the pivotal points of said operating lever and of said buffer levers and stops for limiting the movement of said buffer levers.

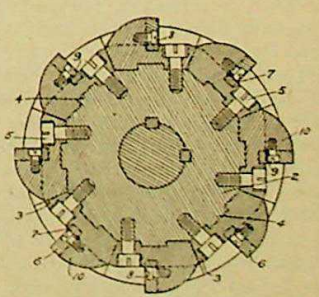
3. In a steering mechanism attachment, a plate, clamps to secure said plate on a vehicle axle, an operating lever pivot stud secured to the plate in alinement with the place of location of the vehicle axle, an operating lever pivoted on said stud and projecting beyond said plate, a device for connecting said operating lever to the connecting rod of the steering mechanism of a vehicle, a pair of buffer levers, a buffer lever pivot stud on said plate, located to one side of the place of axle location, a stud on said operating lever to engage said buffer levers and located between the pivotal points of said operating lever and of said buffer levers, and stops for limiting the movement of said buffer levers.

4. A steering mechanism attachment comprising a plate, elements by means of which said plate may be secured in position, a pair of buffer levers pivoted to said plate and diverging from the point of pivot, a spring connecting the ends of said levers together, stops for limiting the approaching movement of the ends of said levers, an operating lever pivoted to said plate between the ends of said buffer levers, a stud on said operating lever to engage said buffer levers, and a device for connecting the end of said operating lever to the connecting rod of a steering mechanism.

5. A steering mechanism attachment comprising a plate, elements by means of which said plate may be secured in position, a pair of buffer levers pivoted to said plate and diverging from the point of pivot, a spring connecting the ends of said levers together, stops for limiting the approaching movement of the ends of said levers, an operating lever pivoted to said plate between the ends of said buffer levers, a stud on said operating lever to engage said buffer levers, a device for connecting the end of said operating lever to the connecting rod of a steering mechanism, and a device for adjusting the tension of said spring.

[Claim 6 not printed in the Gazette.]

1,203,901. CRUSHING-ROLL. RAY C. NEWHOUSE, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed July 18, 1914. Serial No. 852,116. (Cl. 83—12.)



1. In a crushing roll, a roll core, a plurality of lug plates forming a shell for said core, a plurality of lugs projecting from each of said plates, each of said plates having a longitudinal recess therein adjacent the leading ends of the lugs thereon, and a wearing plate secured to the leading end of each of said lugs and having a portion extending into the adjacent recess.

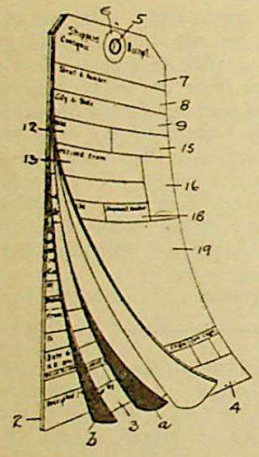
2. In a crushing roll, a roll core, a plurality of lug plates forming a shell for said core, a plurality of lugs projecting from each of said plates, each of said plates having a longitudinal recess therein adjacent the leading ends of the lugs thereon, and a wearing plate removably secured to the leading end of each of said lugs and having a portion thereof extending into the adjacent recess, said lug plates being imperforate at the portions thereof adjacent said recesses.

3. In a crushing roll, a roll core having a series of projections, a plurality of lug plates each having a recess engaging a projection on said core, said lug plates form-

ing a shell for said core, a plurality of lugs projecting from each of said plates, each of said plates having a second longitudinal recess therein adjacent the ends of said lugs and directly opposite the portion thereof in which said first mentioned recess is formed, and a wearing plate secured to the leading end of each of said lugs, said wearing plates having portions extending into said second mentioned recesses and said lug plates being imperforate at the portions thereof adjacent said recesses.

4. In a crushing roll, a roll core having a series of longitudinal projections, a plurality of lug plates each having a longitudinal recess coacting with a projection on said core, said lug plates forming a shell for said core, a plurality of lugs projecting from each of said plates, each of said plates having a second longitudinal recess therein adjacent the leading ends of said lugs and directly opposite the portion thereof in which said first mentioned recess is formed, and a wearing plate detachably secured to the leading end of each of said lugs, said wearing plates having portions extending into said second mentioned recesses.

1,203,902. SHIPPING-TAG. REEFY M. NICHOLS, San Francisco, Cal. Filed Jan. 17, 1914. Serial No. 812,678. (Cl. 11—23.)



1. A shipping tag comprising a tag portion to be attached to the package being shipped and having a way bill form printed thereon, a superposed shipper's receipt portion attached to said tag and having a form printed thereon similar to and in registration with the form on said tag portion, a carbon transfer surface between said tag and receipt portions, an area on said receipt portion containing printed matter relating to the shipping agreement and an area on said tag under said printed area containing a printed delivery receipt form.

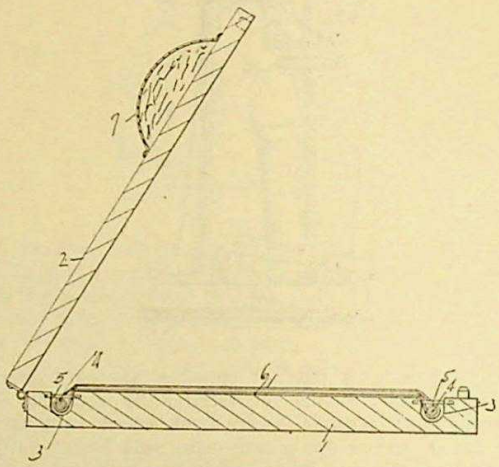
2. A shipping tag comprising a sheet of thin material, a tag of heavier material arranged beneath said sheet and attached thereto by an eyelet whereby both may be attached to a package, transfer means located between said sheet and tag, similar areas in registration included on said sheet and tag to contain the name of the city of shipment, the city of destination, the date and the route number of the first railroad over which the package is to be carried, said tag being provided with a weakened line whereby a portion may be detached.

3. A shipping tag adapted to be attached to a package, comprising in one sheet a portion having line inclosed areas thereon for the receipt of the names and addresses of the consignor and consignee, a detachable portion comprising a delivery receipt having an area thereon for the receipt of the consignee's signature and a detachable portion having on one surface areas to contain the names of the points of shipment and destination and on the other surface areas to contain data indicating the routing of the package.

4. A shipping tag comprising a tag portion to be attached to the package and two superposed detachable sheets, similar line inclosed areas in registration on said tag and sheets and line inclosed areas on said tag corresponding to a printed area on the upper superposed sheet.

5. A shipping tag comprising a tag portion, two superposed sheets, carbon surfaces arranged between said sheets and tag portion, an eye securing said sheets and tag portion together, corresponding line inclosed areas in registration on said sheets and tag portion and non-corresponding line inclosed areas on said upper sheet and tag portion, the last mentioned areas of the tag portion being separated from the body of the tag portion by a weakened line.

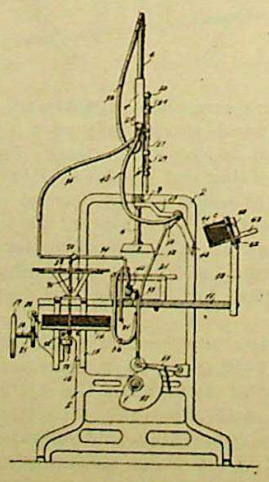
1,203,903. SILVERWARE - POLISH. JULIA NYSTRAND, Seattle, Wash. Filed May 24, 1916. Serial No. 99,508. (Cl. 51—6.)



1. In a device of the class described, the combination of an endless polishing member secured to a base block, and means for compressing the said member against the said block.

2. In a polishing device the combination of a channeled base block, loose rods retained in said channels, an endless and flexible polishing member passing around said rods and over the top of the said block in double ply, a cover hinged to said block and adapted to be closed down upon the top of the polishing member, whereby pressure is applied to an object to be polished which is inserted between the plies of the polishing member.

1,203,904. ENVELOP - MACHINE. GEORGE S. OTEY, Dallas, Tex., assignor to The Hesse Envelope Company, Dallas, Tex., a Corporation of Texas. Filed Feb. 20, 1915. Serial No. 9,484. (Cl. 93—61.)



1. In an envelop machine the combination with a frame, of a trap having suction openings pivoted on the

frame, a plunger provided with slots adapted to deliver a patch to the trap and also provided with suction openings, a tubular shaft journaled on the frame, patch carriers provided with suction passages carried by said tubular shaft and adapted to convey a patch to the plunger, the slots of said plunger adapted to receive said patch carriers, and a suction means connected with said trap, plunger and carrier.

2. In an attachment for envelop machines, the combination of a hollow creaser plunger, a tubular rock shaft horizontally journaled adjacent to the path of travel of said creaser plunger, a plurality of suction nozzles carried by said tubular rock shaft and adapted to deliver a patch to said plunger, the free extremities of said suction nozzles formed on an angle, an actuating arm fixed to said rock shaft, a link pivoted to said actuating arm, and a cam adapted to reciprocate the link.

3. In an envelop machine, the combination of a hollow plunger shaft, a hollow plunger provided with apertures carried by said shaft, a trap provided with apertures positioned beneath the plunger and adapted to receive a patch from the plunger, a hollow pivoted patch carrier disposed in operative relation with the plunger and adapted to convey a patch thereto, suction means connected with the apertures of the trap, with said patch carrier, and with the hollow plunger and means for controlling the suction therein.

4. In an envelop machine, the combination of a hollow plunger shaft, a hollow plunger provided with apertures carried by said shaft, a trap provided with apertures adapted to receive the patch from the plunger, a patch carrier having suction apertures adapted to convey a patch to the plunger, and suction means communicating with the apertures in the trap, patch carrier and hollow plunger and means for controlling the suction therein.

5. In an envelop machine, the combination of a hollow plunger shaft, a hollow plunger provided with apertures carried by said shaft, a suction control valve communicating with the plunger, an air admission valve communicating with the apertures of the plunger, a rotatable tubular shaft journaled on the frame, suction nozzles provided with apertures formed in their extremities carried by the tubular shaft, and a suction means connected with the tubular shaft and with said control valve.

[Claims 6 to 13 not printed in the Gazette.]

1,203,905. SHORTENING COMPOSITION. ROBERT T. PAESSLER, Wilkes-Barre, Pa. Filed Mar. 15, 1916. Serial No. 84,399. (Cl. 99—10.)

1. The herein described shortening consisting of an edible oil held in an emulsified state by a saponified agent.

2. A process of producing shortening consisting in mixing an edible oil with a substance having an alkaline reaction, and water.

3. A process for producing shortening consisting in mixing an edible oil with a substance having an alkaline reaction.

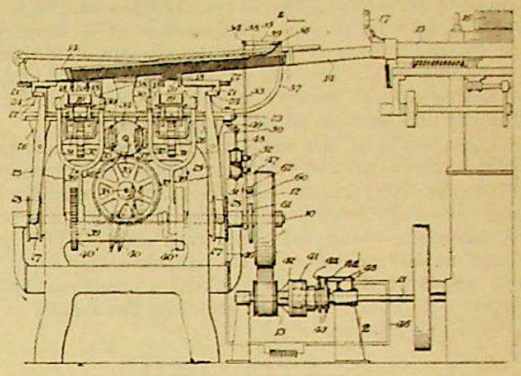
4. The herein described shortening consisting of an edible oil held in an emulsified state by an aqueous mixture of a saponified ingredient having an ammonia base.

5. The herein described shortening consisting of an edible oil and a saponified ingredient having an ammonia base.

[Claims 6 to 11 not printed in the Gazette.]

1,203,906. AUTOMATIC STOPPING AND STARTING MECHANISM FOR MATCH-PACKING MACHINES. MICHAEL PARIDON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 14, 1916. Serial No. 84,023. (Cl. 144—61.)

1. The combination with a match-packing machine having a tray carrier and a feeder for progressively delivering matches to the trays on the carrier, of mechanism, including a power-driven element, for actuating the carrier, and means, including a member under the influence of the matches in the feeder, for rendering said element inactive when the contents of the feeder fall to or below a certain level.



2. The combination with a match-packing machine having a tray carrier and a feeder for progressively delivering matches to the trays on the carrier, of mechanism, including a power-driven element, for actuating the carrier, and means, including a member under the influence of the matches in the feeder, for rendering said element inactive when the contents of the feeder fall to or below a certain level, and for rendering said element active when the contents of the feeder rise to or above said level.

3. The combination with a match making machine and a match packing machine associated therewith, including means for feeding the matches from the match making machine to the match packing machine, of drive mechanism for the two machines, including an element operative to stop the packing machine independently of the match making machine, and means, including a member under the influence of the matches in the feeder, for determining the operation of said element.

4. The combination with a match making machine and a match packing machine associated therewith, including means for feeding the matches from the match making machine to the match packing machine, of drive mechanism for the two machines, including an element operative to stop and start the packing machine, and means, including a member under the influence of the matches in the feeder for actuating said element to stop the packing machine when the contents of the feeder fall below a certain level and to start the packing machine when the contents of the feeder rise to or above said level.

5. The combination with a match packing machine having a tray carrier and a trough-like hopper for delivering matches to the trays on the carrier, of mechanism, including a power-driven element, for actuating the carrier, and means, including a member under the influence of the matches in the hopper, for rendering said element inactive when the contents of the hopper fall to or below a certain level.

[Claims 6 to 13 not printed in the Gazette.]

1,203,907. GAS-PLATE. GEORGE E. PICKUP, Newark, Ohio, assignor to The Wehrle Company, Newark, Ohio, a Corporation of Ohio. Filed June 26, 1914, Serial No. 847,391. Renewed July 28, 1916. Serial No. 111,959. (Cl. 126—40.)

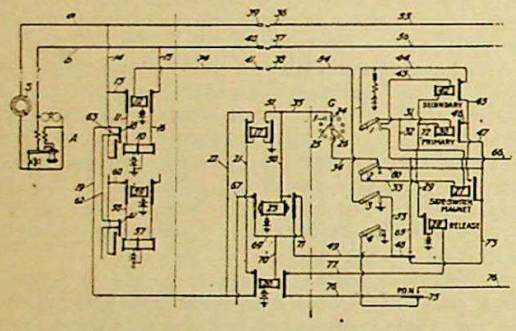
1. In a gas plate, the combination of a rectangular top frame having at its inner edge an offset ledge, a grid mounted on said ledge, a pair of end frames having outwardly projecting bifurcated lugs, said end frames having

ledges that underlie the top frame, and bolts passing through said top frame and through said lugs to rigidly secure the end frames to the top frame the outer edges of the ends of said top frame resting upon said lugs.

2. In a gas plate, the combination of a supporting frame having a pair of sockets at opposite ends thereof, and a burner-supporting rod having angular ends adapted to be seated in said sockets in either of two positions for supporting the burners at different elevations.

3. A gas plate of the character described comprising a top frame, two rigid end frames attached to the respective ends of the top frame, each end frame comprising a unitary structure having supporting feet and a horizontal ledge extending along the inner face thereof, said inner face also having a socket, a drip pan removably supported on the ledges of the end frames, and a burner-supporting rod having its ends removably engaging the sockets of the respective end frames.

1,203,908. MACHINE-SWITCHING TELEPHONE-EXCHANGE SYSTEM. JOHN N. REYNOLDS, Greenwich, Conn., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 7, 1915. Serial No. 49,220. (Cl. 179—18.)

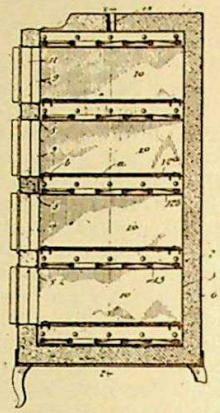


1. In a telephone exchange system, the combination with a plurality of lines, finders to which said lines are multipled, driving magnets therefor, an extended starter wire for associating an idle finder with said lines, and means actuated upon the initiation of a call for closing a circuit including said starter wire to initiate travel of said finder, a contact operated by the finder brush shaft when it is driven more than a predetermined distance by said magnet for extending said starter wire to the next idle finder.

2. In a telephone exchange system, the combination with a plurality of lines divided into groups, finders to which said lines are multipled, a magnet for driving said finder in a primary direction to select the calling group, a magnet for driving said finder in a secondary direction to select the calling line therein, an extended starter wire for associating an idle finder with said line groups, and means actuated upon the initiation of a call for closing a circuit including said starter wire to initiate travel of said finder, of means operated in case such finder is driven more than a predetermined distance by either magnet for extending said starter wire to the next idle finder.

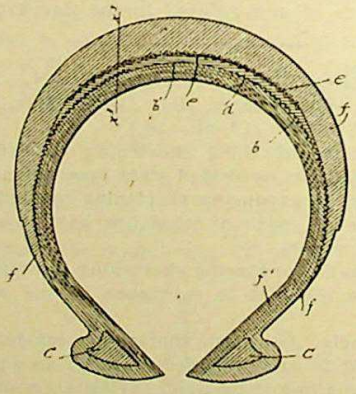
3. In a telephone exchange system, the combination with a plurality of lines divided into groups, finders in which said lines terminate in multiple contacts, the shaft of said finder having brushes adapted to engage therewith, a magnet for driving said shaft in a primary direction to select the calling group, a magnet for driving said shaft in a secondary direction to select the calling line therein, an extended starter wire for associating an idle finder with said line groups and including the primary magnet of such finder, and means actuated upon the initiation of a call for closing the circuit of said magnet over said starter wire, of a contact closed by said shaft in case it is driven more than a predetermined distance by either magnet for extending said starter wire to the next idle finder.

1,203,909. ELECTRIC BAKER'S OVEN. EDWARD H. RUCKLE, Chicago, Ill., assignor to Hughes Electric Heating Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 27, 1914. Serial No. 821,361. (Cl. 219—35.)



In an electric bake oven, the combination of an insulated oven structure, an electrical heating element at the top of said structure, an electrical heating element at the bottom of said structure, intermediate heating elements between said upper and lower heating elements, said heating elements extending horizontally the full distance between the front and rear walls of said oven structure and said oven structure being closed whereby heat circulation is prevented in said structure and heat applied by radiation against the top and bottom of articles placed on said heating elements to be baked, the arrangement as described causing the heat to be uniform throughout the structure and enabling the full capacity of the structure to be used for baking.

1,203,910. VEHICLE-TIRE. ARTHUR JOHN SAVAGE, San Diego, Cal., assignor to The Savage Tire Company, San Diego, Cal., a Corporation of California. Filed May 21, 1915. Serial No. 29,493. ((Cl. 152—13.)



1. An improved built-up tire, comprising a built-up woven fabric carcass with its beads, a layer of woven fabric applied over the carcass, a cushion layer applied over said fabric layer, and a tread applied over said cushion layer; said applied fabric layer being of finer weave than the fabric of said carcass.

2. An improved built-up tire, comprising a built-up woven fabric carcass with its beads, a layer of woven fabric applied over the carcass, a cushion layer applied over said fabric layer, and a tread applied over said cushion layer; said applied fabric layer being of finer weave than the fabric of said carcass; there being a breaker strip between said cushion layer and the tread.

3. An improved built-up tire, comprising a carcass with its beads, a relatively fine layer of woven fabric applied over the carcass, a cushion layer applied over said fabric layer, and a tread applied over said cushion layer; said

fabric layer being interrupted to provide two spaced portions extending circumferentially of the tire.

4. An improved built-up tire, comprising a carcass with its beads, a relatively fine layer of woven fabric applied over the carcass, a cushion layer applied over said fabric layer, and a tread applied over said cushion layer; said fabric layer being interrupted to provide two spaced portions extending circumferentially of the tire, the carcass of the tire comprising a plurality of superposed fabric layers, the weave of which is coarser than that of said first named fabric layer.

5. An improved built-up tire, comprising a carcass provided with beads, a bonding strip of fabric of relatively fine weave applied over the carcass and interrupted in its median portion circumferentially of the tire, a cushion layer applied over said fabric layer, a breaker strip applied over said cushion layer, and a tread applied over said breaker strip; said fabric layer providing a bond between the carcass and the cushion layer, and the breaker strip providing a bond between the cushion layer and the tread.

[Claims 6 and 7 not printed in the Gazette.]

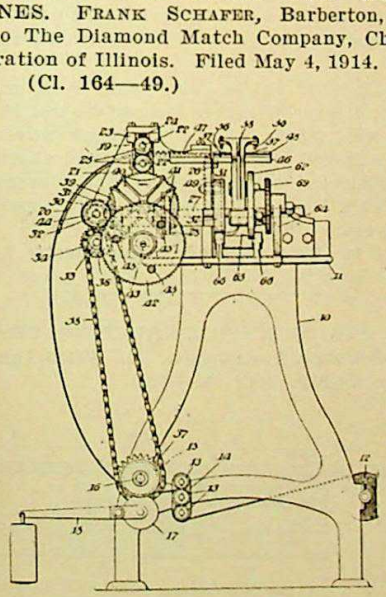
1,203,911. METHOD OF MANUFACTURING LEAD CARBONATES. JOHN A. SCHAEFFER, Joplin, Mo., and JOHN R. MACGREGOR, Chicago, Ill., assignors to Picher Lead Company, Joplin, Mo., a Corporation of Missouri. Filed May 2, 1916. Serial No. 94,883. (Cl. 134—75.)

1. The method of manufacturing lead carbonate which consists in mixing fumed litharge with water and treating the mixture with carbon dioxid gas.

2. The method of manufacturing lead carbonate which consists in mixing fumed litharge in water having acetic acid in solution and treating the mixture with carbon dioxid gas.

3. The method of manufacturing basic lead carbonate which consists in mixing fumed litharge in water having acetic acid in solution, treating the mixture with carbon dioxid gas and stopping the gas treatment when the basic lead carbonate formed has the desired composition.

1,203,912. FEED MECHANISM FOR BOX-SHUCK MACHINES. FRANK SCHAFER, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 4, 1914. Serial No. 836,108. (Cl. 164—49.)

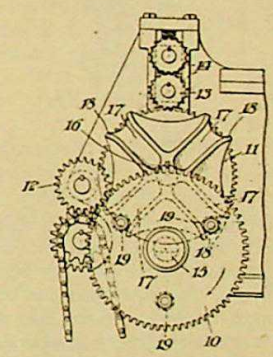


1. In mechanism of the character described, the combination of means for feeding a strip of material, means for severing succeeding lengths or sections from said strip, and means for directly feeding said lengths or sections edgewise in a path at right angles to that of the strip immediately succeeding the severance of the strip, said last-named means including a reciprocating pusher head the forward and backward strokes of which are through different paths.

2. In mechanism of the character described, the combination of rollers for feeding a strip of material, means for intermittently actuating said rollers, cutter mechanism intersecting the path of the material and adapted to sever succeeding lengths therefrom, a reciprocating pusher head, and means for directly moving the same forward to advance each severed length in a horizontal path at right angles to that of the strip immediately succeeding the severance of the strip and then for returning said head in a different path.

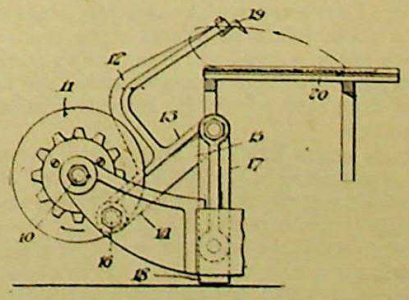
3. In mechanism of the character described, the combination of rollers for feeding a strip of material, means for intermittently actuating said rollers, a guide extending at right angles to and intersecting the path of the strip, said guide having vertical slots extending longitudinally thereof, cutter mechanism adjacent said guide adapted to sever suceeding lengths from the leading end of the strip, a pusher-head for successive lengths movable longitudinally of the guide, said head having depending pins movable relatively to the vertical slots in the guide, and means for actuating said pusher-head.

1,203,913. MECHANICAL MOVEMENT. FRANK SCHAFER, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 4, 1914. Serial No. 836,109. (Cl. 74—41.)



Mechanism of the character described comprising two rotatable members mounted in lateral relation to each other, one of said members constituting a driven element having a series of corresponding radial channels with flaring arcuate portions at their outer ends, and the other member constituting a driving element having a series of tappets equally spaced apart at points equidistant from its center and adapted to coact successively with the walls of the said channels and impart to the driven element an intermittent rotary motion, two of the said tappets concurrently contacting with and riding upon the adjacent arcuate portions of the two channels at the end of each impulse of the driven element, the walls of said adjacent arcuate portions comprising corresponding arcs described from the center of the driving element with a radius equal to the radial distance of the inner face of the tappets from said center.

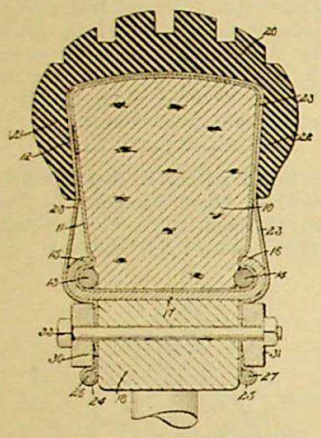
1,203,914. MECHANICAL MOVEMENT. FRANK SCHAFER, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 4, 1914. Serial No. 836,110. (Cl. 101—36.)



Mechanism of the character described comprising a rotatable crank element, an angular feed-frame provided

with two oppositely-extending arms, one of which has a pivotal connection with the crank element, and a rocker pivoted to the other arm of said frame, whereby the forward end of said frame is moved forward in a horizontal path and is then returned in a curved path to position for a succeeding forward movement.

1,203,915. VEHICLE-WHEEL TIRE. EUGENE SCHMITT, New York, N. Y. Filed May 5, 1916. Serial No. 95,572. (Cl. 152—5.)



1. A vehicle wheel having a felly and a rim, and a tire comprising a tire body made of a resilient material such as cork, a covering inclosing the said body, retaining rings within the said covering, the said body having inner corners at which the said rings are arranged, the said rim being provided with curved retaining flanges extending inward at their edges and into which fit the said retaining rings and the portions of the covering overlying the rings.

2. A vehicle wheel having a felly, a rim on said felly, and a tire comprising a tire body of cork and approximately rectangular in cross section, the tire body having inner corners, a covering of a flexible material inclosing the said tire body and laced at one side, retaining rings within the said covering at the inner corners of the said tire body, the said rim being provided with curved flanges extending inwardly over the said rings and engaging the said rings and the portions of the covering overlying the rings.

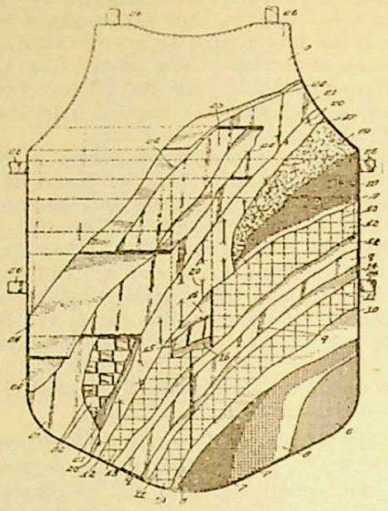
3. A vehicle wheel having a felly, a rim on said felly, and a tire comprising a tire body made of a resilient material such as cork, a covering inclosing the said body, retaining rings within the said covering, the said body having inner corners at which the said rings are arranged, the said rim being provided with fastening flanges into which fit the said retaining rings and the portions of the covering overlying the rings, a tread of rubber having inwardly extending flanges, and an attaching member of a flexible material secured to the inner face of the tread and its flanges and secured to the said felly.

4. A vehicle wheel, comprising a rim having retaining flanges, a tire body engaging the said rim, rings engaging the tire body, the retaining flanges of the rim extending over the said rings, a tread of rubber having inwardly extending flanges and fitting onto the outer face and sides of said tire body, and means for removably securing the tread in position.

5. A vehicle wheel having a felly, a rim on said felly, and a tire, comprising a tire body, a covering of flexible material inclosing the said tire body, retaining rings within the covering and engaging the tire body, the said rim being provided with fastening flanges into which fit the said retaining rings and the portions of the covering overlying the rings, a tread, fitting onto the covering of the tire body, and means for securing the tread in position.

[Claim 6 not printed in the Gazette.]

1,203,916. BULLET-PROOF SHIELD. ALBERT SCHWARZ, Chicago, Ill., assignor of one-tenth to Francis A. Doyle, Chicago, Ill. Filed July 8, 1916. Serial No. 108,120. (Cl. 89—36.)



1. A bullet-proof shield comprising a plurality of layers of hard sheet metal; layers of metal wire fabric; and layers of cloth fabric between and spacing the layers of sheet metal and layers of wire fabric apart.

2. A bullet-proof shield comprising highly tempered sheet metal plates, and a plurality of thicknesses of silk fabric between said metal plates.

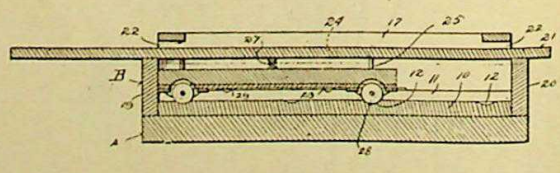
3. A bullet-proof shield comprising a plurality of layers of metallic material, certain of said layers being hard sheet metal plates and other of said layers being metal woven wire; and layers of tough material between said other layers of material.

4. A bullet-proof shield comprising a plurality of metallic material, certain of said layers being hard imperforate plates, other of said layers being woven from strips of hard and still other of said layers being woven wire fabric; and layers of cloth material between the metallic layers.

5. A bullet-proof shield comprising a layer of woven wire fabric; a layer of highly tempered steel sheets above the woven wire fabric; a layer of fabric woven of strips of highly tempered steel above said steel sheets; a layer of highly tempered steel above said last mentioned fabric; and thick layers of cloth material separating said metallic layers.

[Claims 6 to 10 not printed in the Gazette.]

1,203,917. PHOTOGRAPHIC-PRINTING FRAME. ERNEST C. SCUDDER, Farmington, Ill. Filed Jan. 28, 1916. Serial No. 74,838. (Cl. 95—73.)



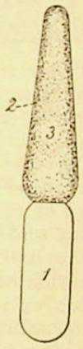
1. A photographic printing frame comprising a base, a cover hinged thereto, means for securing a sheet of sensitized paper to the base, a negative carrying frame movably mounted on the cover, and means for moving said frame to dispose the latter in different positions with respect to the paper to be printed.

2. A photographic printing frame comprising a base, a cover hinged thereto, said cover including a slidably mounted top member, a negative carrying frame secured to the top member for movement therewith and for movement toward and away from the top member, means for

yieldingly holding said frame at the limit of its movement away from the top member, and means for releasably securing the frame in different printing positions with respect to a sheet of sensitized paper carried by the base.

3. A photographic printing frame comprising a base having recesses in its upper side, a cover hinged to the base, said cover including a slidably mounted top member, a negative carrying frame secured to the top member for movement therewith and for movement toward and away from the top member, means for yieldingly holding the frame at the limit of its movement away from the top member, and rollers on the frame engageable in the recesses of the base to secure the frame in different positions with respect to a sheet of sensitized paper carried by the base.

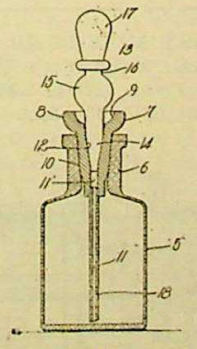
1,203,918. FLESH-FILE. NETTIE E. SIBLEY, Springfield, Mass. Original application filed Nov. 8, 1913, Serial No. 799,912. Divided and this application filed Jan. 7, 1916. Serial No. 70,757. (Cl. 30—23.)



1. The process of making an abrading and antiseptic mixture or compound, for flesh files, consisting in mixing with powdered quartz boric acid and borax, in spraying such mixture with oil of birch dissolved in alcohol and to which thymol has been added, and in mixing all of the said elements together.

2. An abrading and antiseptic coating, for flesh files, consisting of a quantity of powdered quartz having thoroughly worked into it proportionately small quantities of boric acid and borax, a proportionately small quantity of oil of sweet birch dissolved in alcohol and having added thereto a proportionately small quantity of thymol, said oil and thymol also being thoroughly worked into said quartz with said acid and borax, and a binder of paste and glue for the aforesaid elements.

1,203,919. BOTTLE-STOPPER AND PIPETTE. CHARLES ASBURY SIMPSON. Boston, Mass. Filed Nov. 1, 1915. Serial No. 59,058. (Cl. 215—54.)



1. In combination, a bottle, a stopper for said bottle made of rigid material with a conical chamber formed on the longitudinal axis of said stopper, a tubular extension from the lower end of said chamber to the bottom of said bottle and a pipette having a conical tip formed to fit said chamber.

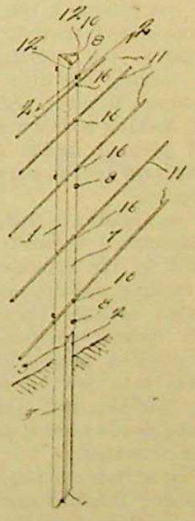
2. In combination, a bottle, a stopper for said bottle made of rigid material having a bore extending therethrough and comprising a conical chamber in its intermediate portion, a tubular lower portion and an enlarged bowl-shaped upper portion and a pipette, having a portion thereof formed to fit into said conical chamber of said stopper and having an enlarged central portion forming a bulb.

3. In combination, a bottle and a tubular pipette extension having its upper part enlarged to form a conical stopper fitting the neck of said bottle, the bore of said tube enlarged within its upper part to form two connected chambers, the uppermost chamber being bowl-shaped and the lower chamber being conical-shaped and a pipette having its lower part formed as a conical tip and its middle portion enlarged to form a bulb, said conical tip being constructed to fit within said lower chamber in said tubular pipette extension, whereby a continuation or extension of the pipette to the bottom of the bottle for the purpose of sucking up into the pipette and removing from the bottle portions of the liquid contents is formed.

4. In combustion, a bottle and a pipette in two parts, one part forming a permanent stopper constructed to fit the neck of said bottle and having a conical bore with a tubular extension projecting from its lower end to the bottom of said bottle, the other part of said pipette constituting an auxiliary stopper and comprising a member having a conical tip constructed to fit said conical bore and an enlarged central portion forming a chamber, the upper end of said member terminating in a tubular extension and a collapsible bulb attached to said tubular extension.

5. In combination, a stopper for a bottle having a conical bore and a tubular extension projecting from its lower end of substantial length and adapted to extend to the bottom of said bottle, and a pipette having a conical tip constructed to fit said conical bore and an enlarged central portion forming a chamber, the upper end of said pipette terminating in a tubular extension and a collapsible bulb attached to said tubular extension.

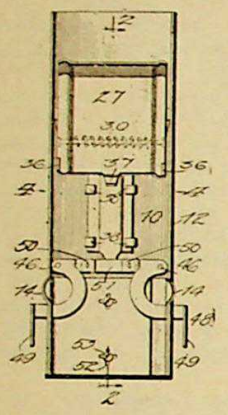
1,203,920. FENCE-POST. CHARLES SLYFIELD, Chaseville, Fla. Filed Aug. 19, 1915. Serial No. 46,267. (Cl. 189—23.)



In improvements in fence posts of the kind set forth, the combination of a fence post body consisting of two flanges extending at right angles to each other in cross section and being constructed of sheet metal and a cavity in said body formed by said flanges, of a wood filler angular in cross section corresponding with and fitting said cavity, and which filler can be fastened in the recess whereby the fence wires may be held a proper distance above the ground, the opposite parallel longitudinal vertical corners of said filler having flanges overlying the edges of the flanges of the angular body and extending beyond the body, thereby preventing the fence wires from contacting with the edges of the flanges of said body, the

outer face of the wood filler being curved in cross section, which curvature extends from one extreme edge of one flange of the filler to the extreme edge of the opposite flange with which the fence wires engage to prevent a decided bend in the wire, said body having openings in the corner where the two flanges of the body come together, and means to pass through any part of the filler and engage said openings to secure the filler in place in the body.

1,203,921. TOOL-HOLDER. ERIC MORRIS SMITH, Okanogan, Wash. Filed Jan. 11, 1916. Serial No. 71,556. (Cl. 24—3.)



1. A tool holder comprising a body portion, stationary supporting jaws associated therewith, and a locking jaw normally in unlocked position and actuated by the insertion of a tool into the holder to move to locking position and retain the tool in said holder.

2. A tool holder comprising a body portion, stationary supporting jaws associated therewith, a locking jaw normally in unlocked position and actuated by the insertion of a tool into the holder to move to locking position and retain the tool in said holder, and a sliding member engaged by said locking jaw when moved to locking position to retain the same in such position.

3. A tool holder comprising a body portion, stationary supporting jaws associated therewith, a normally open locking jaw actuated by the insertion of a tool into the holder to move to locking posititon and retain the tool in said holder, a sliding member engaged by said locking jaw when moved to locking position to retain the same in such position, and pivoted means for disengaging said sliding member from said jaw to permit the return of the latter to normal position.

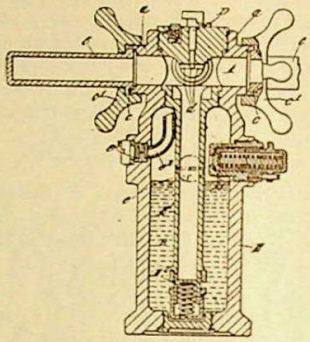
4. A tool holder comprising a body portion, stationary supporting jaws associated therewith, a normally open locking jaw actuated by the insertion of a tool into the holder to move to locking position and retain the tool in said holder, a sliding member engaged by said locking jaw when moved to locking position to retain the same in such position, pivoted means for disengaging said sliding member from said jaw to permit the return of the latter to normal position, and means for automatically returning said locking jaw to normal position after being released by said sliding member.

5. A tool holder comprising a body portion, a jaw supporting member pivoted thereto, and a locking jaw, normally in unlocked position, pivoted to said supporting member and automatically operated by the insertion of a tool into said holder to move said jaw to locking position.

[Claims 6 to 10 not printed in the Gazette.]

1,203,922. CHARGING OR REPLENISHING RECEPTACLES WITH GASES UNDER PRESSURE. FRANKLIN ELIJAH SMITH, Westminster, London, England, assignor to Vickers Limited, Westminster, London, England. Filed Apr. 26, 1916. Serial No. 93,810. (Cl. 60—3.)

1. Apparatus for charging or replenishing a receptacle with gases under pressure, comprising a filter, a chamber adapted to receive a composition or substance which contains its own oxygen for supporting combustion, and a conduit leading from said chamber to near the bottom of said filter so that all the gases generated by the combustion of said composition enter the filter at one point and pass from the open end of the said conduit through the filter, thus obtaining substantially constant filtration of the gases.

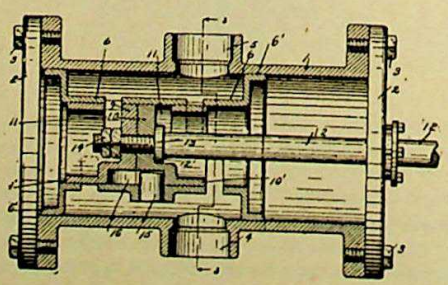


2. Apparatus for charging or replenishing a receptacle with gases under pressure, comprising a liquid filter, a chamber adapted to receive a composition or substance which contains its own oxygen for supporting combustion, and a conduit leading from said chamber to near the bottom of said liquid filter so that all the gases generated by the combustion of the said composition enter the liquid filter at one point and pass from the open end of said conduit through the liquid filter, thus obtaining substantially constant filtration of the gases.

3. Apparatus for charging or replenishing a receptacle with gases under pressure, comprising a filtering and cooling device, a chamber adapted to receive a composition or substance which contains its own oxygen for supporting combustion, and a conduit leading from said chamber through said device to near the bottom of said device so that all the gases generated by the combustion of the said composition enter the device at one point and pass from the open end of said conduit through the said device, thus cooling the gases and obtaining substantially constant filtration of said gas.

4. Apparatus for charging or replenishing a receptacle with gases under pressure, comprising a liquid filtering and cooling device, a chamber adapted to receive a composition or substance which contains its own oxygen for supporting combustion, and a conduit leading from said chamber through said device to near the bottom of said device so that all the gases generated by the combustion of the said composition enter the device at one point and pass from the open end of said conduit through the said device, thus cooling the gases and obtaining substantially constant filtration of said gases.

1,203,923. SANITARY MILK-PUMP. KARL D. SMITH, Battle Creek, Mich., assignor to Union Steam Pump Company, Battle Creek, Mich. Filed Oct. 3, 1914. Serial No. 864,932. (Cl. 103—81.)



1. In a structure of the class described, the combination of a pump cylinder provided with inlet and discharge openings, a piston cylinder disposed within said pump cylinder and provided with annular flanges at the ends thereof.

having a sliding engagement with the wall of the pump cylinder, webs formed integral with said piston cylinder and extending between said flanges at diametrically opposite points on said piston cylinder, said webs having a sliding engagement with the wall of the pump cylinder and dividing the space between the flanges of said piston cylinder into an intake chamber and a discharge chamber, a pair of intake ports in said piston cylinder communicating with the said intake chamber, a pair of discharge ports in said piston cylinder communicating with said discharge chamber, said discharge ports being staggered relative to said intake ports, a two part piston disposed within said piston cylinder in sliding engagement therewith and having a limited sliding movement relative thereto, the parts of said piston being provided with oppositely extending annular flanges, a port in each of said flanges adapted to be brought into alinement with one of the discharge ports of the piston cylinder, each port being so disposed in its piston flange that, when it is in alinement with the corresponding discharge port, said piston flange closes the corresponding intake port while the other piston flange is disposed to close the corresponding discharge port and to open the corresponding intake port, a slot in each part of said piston, said slots being in alinement when the parts of the piston are assembled, a pin carried by the wall of the piston cylinder and disposed in said slots to limit the movement of said piston relative to the piston cylinder, a piston rod, and means securing the parts of said piston together and to said piston rod, all coacting substantially as described and for the purpose specified.

2. In a structure of the class described, the combination of a pump cylinder provided with inlet and discharge openings, a piston cylinder disposed within said pump cylinder and provided with annular flanges at the ends thereof, having a sliding engagement with the wall of the pump cylinder, webs formed integral with said piston cylinder and extending between said flanges, said webs having a sliding engagement with the wall of the pump cylinder and dividing the space between the flanges of said piston cylinder into an intake chamber and a discharge chamber, a pair of intake ports in said piston cylinder communicating with the said intake chamber, a pair of discharge ports in said piston cylinder communicating with said discharge chamber, said discharge ports being staggered relative to said intake ports, a two part piston disposed within said piston cylinder in sliding engagement therewith and having a limited sliding movement relative thereto, the parts of said piston being provided with oppositely extending annular flanges, a port in each of said flanges adapted to be brought into alinement with one of the discharge ports of the piston cylinder, each port being so disposed in its piston flange that, when it is in alinement with the corresponding discharge port, said piton flange closes the corresponding intake port while the other piston flange is disposed to close the corresponding discharge port and to open the corresponding intake port, a slot in each part of said piston, said slots being in alinement when the parts of the piston are assembled, a pin carried by the wall of the piston cylinder and disposed in said slots to limit the movement of said piston relative to the piston cylinder, a piston rod, and means securing the parts of said piston together and to said piston rod, all coacting substantially as described and for the purpose specified.

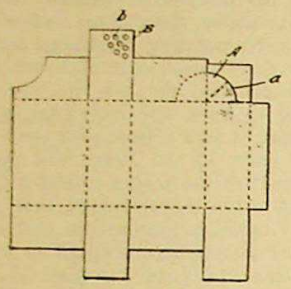
3. In a structure of the class described, the combination of a pump cylinder provided with inlet and discharge openings, a piston cylinder disposed within said pump cylinder and provided with annular flanges at the ends thereof, having a sliding engagement with the wall of the pump cylinder, webs formed integral with said piston cylinder and extending between said flanges, said webs having a sliding engagement with the wall of the pump cylinder and dividing the space between the flanges of said piston cylinder into an intake chamber and a discharge chamber, a pair of intake ports in said piston cylinder communicating with said intake chamber, a pair of discharge ports in said piston cylinder communicating with said discharge chamber, a two part piston disposed within said piston cylinder in sliding engagement therewith and having a limited sliding movement relative thereto, the parts of said piston being provided with oppositely extending annular flanges, a port in each of said flanges adapted to be brought into alinement with one of the discharge ports of the piston cylinder, each port being so disposed in its piston flange that, when it is in alinement with the corresponding discharge port, said piston flange closes the corresponding intake port while the other piston flange is disposed to close the corresponding discharge port and to open the corresponding intake port, a slot in each part of said piston, said slots being in alinement when the parts of the piston are assembled, a pin carried by the wall of the piston cylinder and disposed in said slots to limit the movement of said piston relative to the piston cylinder, a piston rod, and means securing the parts of said piston together and to said piston rod, all coacting substantially as described and for the purpose specified.

4. In a structure of the class described, the combination of a pump cylinder provided with inlet and discharge openings, a piston cylinder disposed within said pump cylidner and provided with anular flanges at the ends thereof, having a sliding engagement with the wall of the pump cylinder, webs formed integral with said piston cylinder and extending between said flanges, said webs having a sliding engagement with the wall of the pump cylinder and dividing the space between the flanges of said piston cylinder into an intake chamber and a discharge chamber, a pair of intake ports in said piston cylinder communicating with said intake chamber, a pair of discharge ports in said piston cylinder communicating with said discharge chamber, a two part piston disposed within said piston cylinder in sliding engagement therewith and having a limited sliding movement relative thereto, the parts of said piston being provided with oppositely extending annular flanges, a port in each of said flanges adapted to be brought into alinement with one of the discharge ports of the piston cylinder, each port being so disposed in its piston flange that, when it is in alinement with the corresponding discharge port, said piston flange closes the corresponding intake port, while the other piston flange is disposed to open the corresponding intake ports, and to close the corresponding discharge port, means connecting said two part piston and said piston cylinder and permitting a limited movement of said two part piston relative to said piston cylinder, a piston rod, and means securing the parts of said piston and to said piston rod, all coacting substantially as described and for the purpose specified.

5. In a structure of the class described, the combination of a pump cylinder provided with inlet and discharge openings, a piston cylinder disposed within said pump cylinder and provided with annular flanges at the ends thereof, having a sliding engagement with the wall of the pump cylinder, means dividing the space between the flanges of said piston cylinder into an intake chamber and a discharge chamber, a pair of intake ports in said piston cylinder communicating with said intake chamber, a pair of discharge ports in said piston cylinder communicating with said discharge chamber, a two part piston disposed within said piston cylinder in sliding engagement therewith, and having a limited sliding movement relative thereto, the parts of said piston being provided with oppositely extending annular flanges, a port in each of said flanges adapted to be brought into alinement with one of the discharge ports of the piston cylinder, each port being so disposed in its piston flange, that when it is in alinement with the corresponding discharge port, said piston flange closes the corresponding intake port, while the other piston flange is disposed to close the corresponding discharge port and to close the corresponding intake port, means for connecting said piston with said piston cylinder, and permitting a limited movement of said piston relative to said piston cylinder, a piston rod, and means securing the parts of said piston together and to said piston rod, all coacting substantially as described and for the purpose specified.

[Claim 6 not printed in the Gazette.]

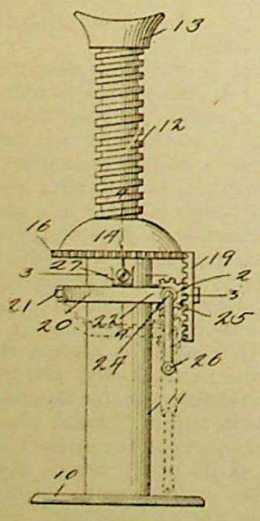
1,203,924. FOLDING CARTON. VERNON C. SNYDER, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 25, 1914. Serial No. 820,994. (Cl. 229—17.)



1. A distributing carton having a body formed with folded end flaps; of the four flaps at one end of the body the innermost flap being formed with distributing perforations; the next and second flap having a cut out portion registering with and exposing a group of perforations at a corner of said flaps; the next and third flap having at its corner which registers with the cut out portion of the second flap a severed spout portion which remains integral with the side of the carton, said severed portion being also integral with the fourth and outermost flap; and said outermost flap having a portion which, when severed on a line substantially coincident with the severed line of said third flap and unfolded at the corner of the carton, forms the other part of such spout.

2. A distributing carton having a body formed with four folded end flaps; the outermost flap being severable to form with the next inner flap a spout at the corner of the carton; said next inner flap being cut and folded to cooperate with the outermost flap to form said spout; and, of the two innermost flaps, one being perforated with a group of distributing holes at the corner under said spout portion, and the other being cut out to expose said group of holes.

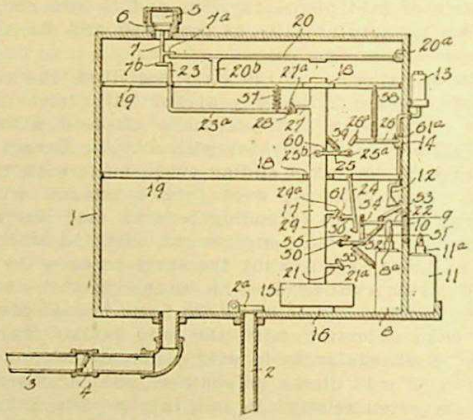
1,203,925. ELEVATING-JACK. LE GRAND SPARKS, Montgomery, N. Y. Filed May 8, 1916. Serial No. 96,203. (Cl. 254—103.)



1. In a jack, a base having a tubular member extending upwardly therefrom and constituting a stand, an elevating screw telescopically mounted in said tubular member, a driven gear having a centrally disposed threaded opening constituting a nut and fitting on said screw, a pair of alined stub shafts projecting from opposite sides of the tubular member, an intermediate gear mounted on one of said shafts, a curved arm mounted on the other shaft and extending around the tubular member into juxtaposition to the intermediate gear, a sleeve on the free end of said arm extending radially to the axis of said shafts, a crank shaft mounted in said sleeve, a driving gear on the inner end of the crank shaft and a crank handle on the outer end of the crank shaft.

2. In a jack, a base having a tubular member extending upwardly therefrom and constituting a stand, an elevating screw telescopically mounted in said tubular member, a driven gear having a centrally disposed threaded opening constituting a nut and fitting on said screw, a pair of alined stub shafts projecting from opposite sides of the tubular member, an intermediate gear mounted on one of said shafts, a curved arm mounted on the other shaft and extending around the tubular member into juxtaposition to the intermediate gear, a sleeve on the free end of said arm extending radially to the axis of said shafts, a crank shaft mounted in said sleeve, a driving gear on the inner end of the crank shaft, a crank handle on the outer end of the crank shaft and a lug on said tubular member and constituting a stop to limit upward movement of said arm.

1,203,926. WATER-ELEVATOR. JAMES M. STAFFORD, Washington, Ind. Filed Nov. 17, 1915. Serial No. 61,900. (Cl. 160—1.)



1. A water elevator, including a closed chamber, a water inlet, a water outlet, check valves controlling the water inlet and water outlet, an air valve, a detent for locking the air valve in an open position, a float within the chamber, means actuated by the rising and falling of the float to alternately open the air valve and release the detent, and means for establishing combustion within the closed chamber when the air valve is closed to produce a partial vacuum therein and cause water to enter the chamber through the inlet.

2. A water elevator, including a closed chamber, a water outlet, a water inlet, check valves controlling the water inlet and water outlet, a float within the chamber, top and side valves for the chamber, means actuated by the rise and fall of the float for simultaneously opening and closing the two valves at intervals of time, and means for establishing combustion within the closed chamber when the valves are closed, thereby producing a partial vacuum therein and causing water to enter the chamber through the inlet.

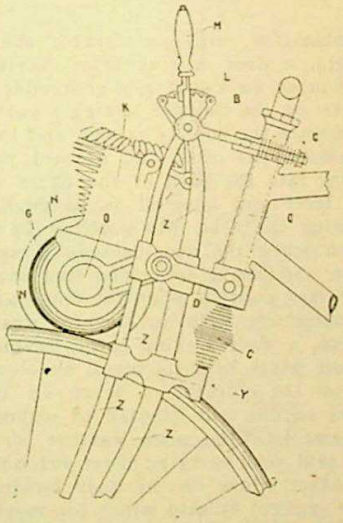
3. A water elevator, including a closed chamber, a water inlet, a water outlet, check valves controlling the water inlet and water outlet, a float within the chamber, top and side valves for the chamber, means actuated by the rise of the float for simultaneously opening the two valves, detents for locking the valves in an open position, means actuated by the float when it reaches the lower limit of its movement for simultaneously releasing the detents, and means for establishing combustion within the chamber when the valves are closed, thereby producing a partial vacuum therein and causing water to enter the chamber through the inlet.

4. A water elevator, including a closed chamber, a water inlet, a water outlet, check valves controlling the water inlet and water outlet, a float within the chamber, a stem projecting upwardly from the float, guide means for the stem, an air valve at the top of the chamber, a second valve at one side of the chamber, trip actuated means controlled by the float for simultaneously opening the two valves when the float reaches the upper limit of its movement, detents for locking the two valves in an open position, trip means actuated by the float when it reaches the lower limit of its movement for simultaneously releasing the two detents, and means for establishing combustion within the closed chamber when the valves are closed, thereby producing a partial vacuum therein and causing water to enter the chamber through the water inlet.

5. A water elevator, including a closed chamber, a water inlet, a water outlet, check valves controlling the water inlet and water outlet, a float within the chamber, a burner within the chamber, an air valve for the chamber, means actuated by the float for igniting the burner and closing the air valve when it reaches the lower limit of its movement, and means actuated by the float for automatically opening the air valve when it reaches the upper limit of its movement.

[Claims 6 and 7 not printed in the Gazette.]

1,203,927. MOTOR FORE-CARRIAGE FOR BICYCLES AND SIMILAR VEHICLES. GIUSEPPE STAGNI, Turin, Italy. Filed May 1, 1914. Serial No. 835,695. (Cl. 21—90.)



1. A device of the character described, comprising a fore-frame, a steering head, a resilient connection between the two, a wheel in said fore-frame, a motor mounted on said fore-frame on each side of the plane of the wheel, a common drive-shaft connected to said motors and running crosswise of the plane of the wheel, and a driving connection between said drive-shaft and the tire of the wheel.

2. A device of the character described, comprising a fore-frame, a steering head, a resilient connection between the two, a wheel in said fore-frame, a motor mounted on said fore-frame on each side of the plane of the wheel, a common drive-shaft connected to said motors and running crosswise of the plane of the wheel, and a roller on said drive-shaft adapted to frictionally engage the tire of the wheel for driving the latter.

3. A device of the character described, comprising a fore-frame, a steering head, a resilient connection between the two, a wheel in said fore-frame, a motor mounted on said fore-frame, and a driving connection between said wheel and motor, said motor being pivoted on the fore-frame, a means mounted on said fore-frame for moving said motor and driving connection into and out of engagement with the tire of the wheel.

1,203,928. CAGE FOR BALL-BEARINGS. FRANK STARIN, Springfield, Mass. Filed Apr. 27, 1916. Serial No. 93,885. (Cl. 64—59.)

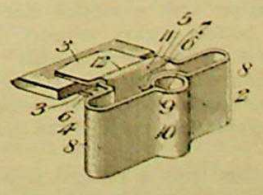
1. A one piece cage for ball bearings, consisting of a ring forming at one face a seat for one side of the balls, and spaced retaining tongues approximately V-shape in cross section and extending integrally from one edge of the ring at approximately a right angle to the said ring face, each tongue having a segmental angular terminal slightly tapering and extending opposite the seat face of the ring.

2. A one piece cage for ball bearings, consisting of a ring concave at one face to form a seat for the balls, and spaced retaining tongues extending integrally from the inner edge of the ring approximately at a right angle to the plane of the ring, each tongue having a tapering segmental terminal bent toward the said concave face, each tongue and its terminal being approximately V-shape in cross section, and the terminal extending in a plane lying within the plane of the ring and the outer side of the balls.

3. A one piece cage for ball bearings, consisting of a ring concave at one face to form a seat for the balls, spaced retaining tongues extending integrally from the inner edge of the ring approximately at a right angle to the plane of the ring, each tongue having a segmental terminal bent toward the said concave face, and outer retaining tongues extending integrally from the outer edge of the ring approximately at a right angle to the plane of the ring and parallel to the said first-named tongue and directly opposite the same, the said outer retaining tongues extending toward the terminals of the other tongues and spaced therefrom.

4. A one-piece cage for ball bearings, consisting of a ring concave at one face to form a seat for the balls, spaced retaining tongues extending integrally from the inner edge of the ring approximately at a right angle to the plane of the ring, each tongue having a tapering segmental terminal bent toward the said concave face, and outer retaining tongues extending integrally from the outer edge of the ring approximately at a right angle to the plane of the ring and parallel to the said first-named tongue directly opposite the same, the said outer and inner tongues being approximately V-shape in cross section and the said outer tongues extending toward the terminals of the other tongues and terminating short of the said terminals.

1,203,929. GARMENT GAGE AND MARKER. FREDERICK W. STARKE and AUGUSTA G. STARKE, West Orange, N. J. Filed Nov. 16, 1915. Serial No. 61,739. (Cl. 33—9.)



1. A gage and marker of the character stated, the same consisting of a head having a passage therethrough adapted to receive a measuring stick, wings extending laterally from the walls of said passage, and a holder for a piece of marking-material, the terminals of said wings freely overlapping and interlocking forming a two-part freely engaged resilient pressure device for the head on said stick.

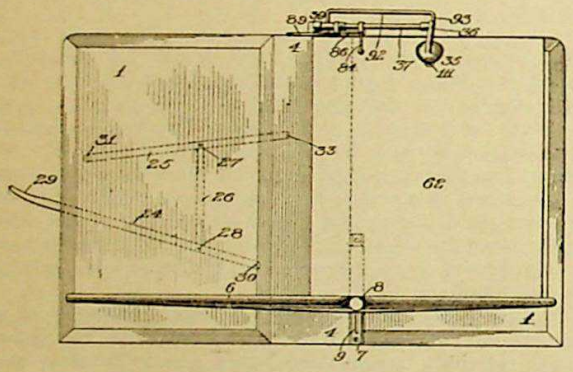
2. In a gage and marker of the character stated, a tubular head adapted to be fitted freely on a measuring stick, and a holder for marking material having its

carrying members on said head, said holder being composed of jaws which are continuous with said members, which members are partly within and partly without said head, and adapted to be clamped to the adjacent wall of said head.

3. A tubular head adapted to be fitted on a measuring stick, a holder for a piece of marking material composed of jaws adapted to receive and hold said piece, and vertically-extending plates continuous with said jaws adapted to be clamped to the adjacent wall of said head.

4. A gage and marker of the character stated composed of a tubular head having on one side outturned jaws adapted to clamp a piece of marking material, and on the opposite side outwardly-extending wings, the terminals of which are adapted to overlap and be connected resiliently forming a two part pressure device, said wings and said jaws being adapted to project from said head in opposite directions forming together means for the engagement of the thumb and fingers of the hand thereon above and below said head in the movement and adjustment of the device.

1,203,930. SHEET-LIFTING MECHANISM. HERMAN STEINMETZ, Rochester, N. Y. Filed Sept. 3, 1915. Serial No. 48,752. (Cl. 84—17.)



1. The combination with a member for engaging one of a series of sheets, of a guard, means for operating said engaging member to lift the sheet engaged thereby, and means for causing the guard to move downwardly and forwardly during the initial operation of the leaf engaging member and thence rearwardly and downwardly to prevent the turning of the adjacent sheet.

2. The combination with a sheet engaging member, of a guard normally positioned above and in front of said sheets, an inclined member movable with the guard, means for operating the sheet engaging member to lift the sheet engaged thereby and to move the guard downwardly, and stationary means coöperating with the inclined member for moving the guard rearwardly during its downward movement, whereby said adjacent sheet is prevented from being turned.

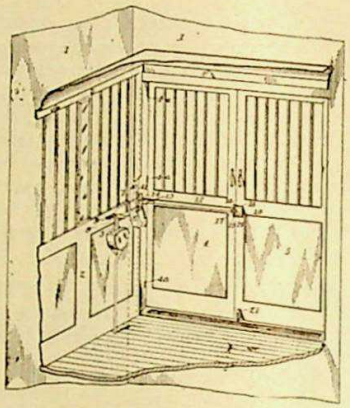
3. The combination with a suction member for engaging a leaf, of a hollow rotary support for the suction member, mechanism in engagement with the rotary support for exhausting air from the suction member and rotating the support, and means for locking said mechanism when the support has reached the limit of its rotating movement.

4. The combination with a suction member for engaging a leaf, of a hollow rotary support for the suction member, operating mechanism in engagement with the rotary support for exhausting air from the suction member and rotating the support, locking mechanism for retaining the operating mechanism in position to hold the rotary support at the limit of its rotating movement, and means controlled by leakage of air for releasing said locking mechanism.

5. The combination with a suction member for engaging a leaf, of a hollow rotary support for the suction member, operating mechanism in engagement with the rotary support for exhausting air from the suction member and rotating the support, locking mechanism for retaining the operating mechanism in position to hold the rotary support at the limit of its rotating movement, means controlled by leaking of air into the suction member for releasing said locking mechanism, and means for returning the operating mechanism and rotary support to their normal positions upon releasing of the locking mechanism.

[Claims 6 to 20 not printed in the Gazette.]

1,203,931. SAFETY-LATCH FOR ELEVATOR-DOORS. JOHN H. STEWART, Jamaica, N. Y., assignor to Stewart Elevator Safety Latch Co. Inc., Queens county, N. Y., a Corporation of New York. Filed Feb. 25, 1916. Serial No. 80,370. (Cl. 187—49.)



1. The combination, with an elevator shaft, of doors leading thereto, a door locking lever having an offset wing near its pivot, an elevator, a controller arm on the elevator, a lever on the elevator having a yoke on one end adapted to embrace the controller arm and lock the same against movement, the other end of said yoke carrying lever extending into the path of the offset wing on the door locking lever and adapted to be engaged by said wing for moving the yoke into position to embrace the controller arm when the door locking lever is released from the door, and means for supporting said door locking lever in locked position when the doors are closed.

2. The combination, with an elevator shaft, of doors leading thereto, a door locking lever having oppositely extending offset wings near its pivot, an elevator, a controller arm on the elevator, a lever on the elevator, having a yoke on one end adapted to embrace the controller arm and lock the same against movement, the other end of said yoke carrying lever extending into the path of the offset wings on the door locking lever and adapted to be engaged by said wings for moving the yoke into position to embrace the controller arm when the door locking lever is swung either up or down from locking position, and means for supporting said door locking lever in substantially horizontal position when the doors are closed.

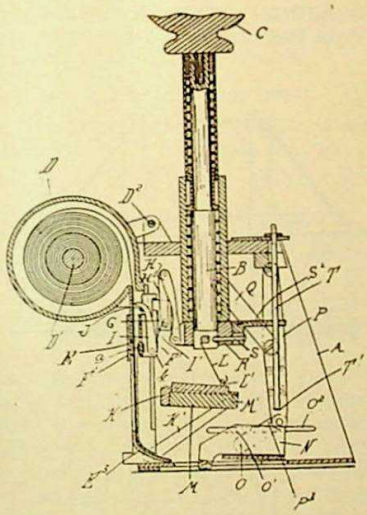
3. The combination, with an elevator shaft, of two doors leading thereto and hinged at opposite edges, means for locking one door closed, a combined latch and keeper pivoted to said door, a keeper on the other door arranged to be engaged by the combined latch and keeper on the first door, a lever extending across the second door but terminating short of the keeper thereon, said lever being adapted to be supported in substantially horizontal position by the combined latch and keeper on the first door when the same is in engagement with the keeper on second door, an elevator, a controller arm on the elevator, and means for automatically locking said controller arm when the lever is not supported in horizontal position.

4. The combination, with an elevator shaft, of two oppositely hinged doors leading thereto, means for locking one door closed, a combined latch and keeper pivoted to said door and having a weighted inner end, a keeper on the other door arranged to be engaged by the combined latch and keeper on the first door when the second door is closed, the weighted end of said combined latch

and keeper normally holding its outer end above said keeper on the second door, a lever extending across the second door but terminating short of the keeper thereon, said lever being adapted to be supported in substantially horizontal position by the combined latch and keeper when the same is in engagement with the keeper on the second door, an elevator, a controller arm on the elevator and means for automatically locking said controller arm when the lever is not supported in horizontal position.

5. The combination, with an elevator shaft with two oppositely hinged doors leading thereto, means for locking one door closed, a combined latch and keeper pivoted to said door and adapted to swing below as well as above the horizontal plane of its pivot, a keeper on the other door adapted to be engaged by the combined latch and keeper on the first door when both doors are closed, a lever extending across the second door but terminating short of the keeper thereon and of the combined latch and keeper except when the latter is supported by the keeper on the second door, said lever being supported by said combined latch and keeper when the latter is engaged with the keeper on the second door, an elevator, a controller arm on the elevator and means for automatically locking said controller arm when the lever is not supported in horizontal position.

1,203,932. STAMP-AFFIXING MACHINE. BENNETT D. STRAIGHT, Detroit, Mich., assignor to Mail-om-eter Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 27, 1909. Serial No. 535,113. (Cl. 216—33.)



1. In a stamp or label affixing device, the combination of a reciprocatory plunger, a feeder for the strip of stamps or labels actuated by said plunger, a foot carried by said plunger for clamping said strip at the termination of the feeding movement thereof, said foot having a movable section for pressing on said strip subsequent to the clamping thereof, and means for automatically uncoupling said feeder and foot from said plunger to permit the further movement of the latter and the actuation of said independently movable foot section thereby.

2. In a stamp and label affixing device, the combination with a frame, a reciprocatory plunger mounted therein, a member having a latch-coupling engagement with said plunger, a feeder and a clamp actuated from said plunger through the medium of said member thereon, means operating at the completion of the feeding movement for unlatching said coupling, said clamp having a portion subsequently operated directly by said plunger for rupturing the stamp strip and pressing the same against the surface to be stamped.

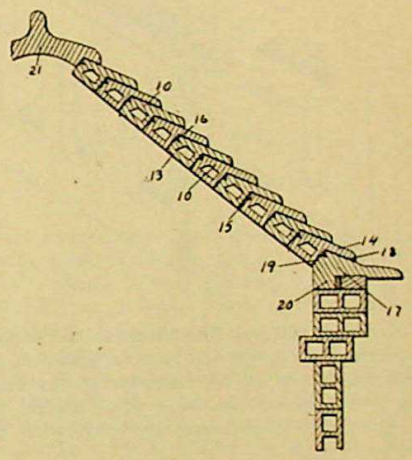
3. In a stamp or label affixing device, a plunger for controlling the stamp affixing, stamp strip feeding and stamp severing means actuated by the forward movement of the plunger, means for disconnecting the stamp feed before the plunger completes its forward movement, and a clamp for the stamp strip applied during the forward movement of the plunger while the stamp feed is disconnected.

4. In a stamp or label affixing device, the combination of a stamp holder, a vertical guide from the holder for the stamp strip, a reciprocatory plunger beside the guide for controlling the stamp affixing, a strip feed carried by the plunger engaging the strip in the vertical guide, and feeding it forward in the downward movement of the plunger, and means for disconnecting the strip feed before the plunger reaches the limit of its motion.

5. In a stamp or label affixing machine, the combination of a strip holder, a vertical guide leading therefrom, a reciprocatory plunger for controlling the stamp affixing arranged beside the guide, and a series of fingers carried by the plunger adapted to engage perforations in the strip in its downward movement to feed the strip forward.

[Claims 6 to 11 not printed in the Gazette.]

1,203,933. SELF-SUPPORTING-TILE ROOF. HALVER R. STRAIGHT, Adel, Iowa. Filed Dec. 5, 1912. Serial No. 735,136. (Cl. 108—1.)



1. A self supporting tile roof comprising a series of blocks laid in layers, each block being provided with a water shed extension of a length capable of extending across and beyond the block in the adjacent layer below, for the purposes stated.

2. A hollow roof tile block, comprising a substantially rectangular body portion, and an extension formed integral with the top of the body portion, said blocks being so shaped and proportioned that when placed in layers to form a roof at an angle of about forty-five degrees, each block when placed in position will be supported by one or more adjacent blocks, and said extension being of such length and shape that it will rest on the top of the adjoining block on the layer below, and project beyond the block on the layer below.

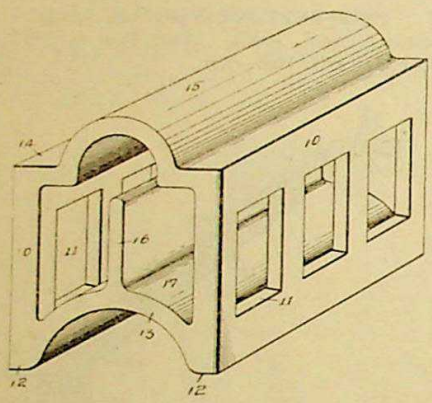
3. A hollow roof tile block, comprising a substantially rectangular body portion, and an extension formed integral with the top of the body portion, said blocks being so shaped and proportioned that when placed in layers to form a roof at an angle of about forty-five degrees, each block when placed in position will be supported by one or more adjacent blocks, and each block being provided at the upper edge of the body portion thereof with a notch designed to receive binding wires or rods, for the purposes stated.

4. An improved self supporting hollow tile roof, comprising a number of layers of roof blocks and arranged in circular form and to form a roof, each block being formed with a substantially rectangular hollow body portion and an extension integral with the top of the hollow body portion and the said extension being designed to rest upon the top of an adjacent row of similar blocks below, a layer of cement or mortar between the adjacent faces

of the body portions of the blocks, said parts being so arranged that when erected in a roof at an angle of about forty-five degrees each block when placed in position will overlap and protect the cement or mortar blocks in the layer below, each block being also provided with a notch in its upper edge portion, and circular binding wires or rods placed in said notches and embedded in the cement or mortar, for the purposes stated.

5. A self supporting tile roof comprising a series of blocks laid in layers, each block being provided with a water shed extension of a length capable of extending across and beyond the block in the adjacent layer below, said blocks and their extensions being so shaped and proportioned that each block as it is being laid in position will be supported by the adjacent blocks.

1,203,934. VENTILATED BUILDING-BLOCK. HALVER RUFUS STRAIGHT, Adel, Iowa. Filed Mar. 31, 1915. Serial No. 18,400. (Cl. 72—41.)



1. In an improved building block or tile formed hollow and comprising sides, top and bottom, and also comprising an upright partition on the interior of the block or tile extending from the bottom to a point spaced apart from the top, the said sides being provided with ventilating openings.

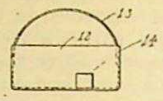
2. In an improved building block or tile formed hollow and comprising sides, top and bottom, the upper surface of the bottom being inclined from its longitudinal center downwardly and toward both sides of the block or tile, an upright partition at the longitudinal center of the bottom extending upwardly to a point spaced apart from the top, there being ventilating openings formed in the sides.

3. In an improved building block or tile formed hollow and comprising sides, top and bottom, the upper surface of the bottom being inclined from its longitudinal center downwardly and toward both sides of the block or tile, an upright partition at the longitudinal center of the bottom extending upwardly to a point spaced apart from the top, there being ventilating openings formed in the sides, the lower portions of said ventilating openings being in a plane as low as the adjacent portions of the top surface of the bottom of the blocks or tiles.

4. In an improved building block or tile formed hollow and comprising upright sides, a top and a bottom, the upright sides being provided with ventilating openings, the top being arched upwardly at its longitudinal central portion, the bottom also being arched upwardly at its longitudinal central portion, the curvature of the arched central portion of the top being somewhat less than the curvature of the arched central portion of the bottom, and an upright partition on the central portion of the bottom extending upwardly to a point spaced apart from the top.

5. In an improved building block formed hollow and comprising sides, top and bottom, the said sides being provided with ventilating openings extending from the top surface of the bottom member to a point slightly below the top of said side, the bottom member being provided with a central longitudinal partition extending upwardly to a point spaced apart from the top member and above the top of said ventilating openings.

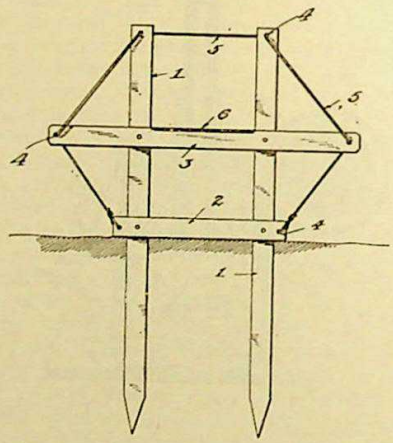
1,203,935. DISTRIBUTER FOR LIQUIDS. THOMAS W. STRINGHAM, Lodi, Cal. Filed Jan. 5, 1916. Serial No. 70,389. (Cl. 137—21.)



1. The combination with a separator, a bracket mounted on the separator and having a projecting plate provided with openings, a receptacle having projecting arms, having hooks engageable with said openings, a plurality of discharge spouts on said receptacle, and another receptacle turnable within the first named receptacle and having an opening arranged to be brought into register with each of said spouts, as described.

2. The combination with a separator, of a receptacle removably supported on the separator and provided with a plurality of discharge outlets, another receptacle turnable within the first named receptacle and having an opening arranged to be brought into register with each of the said discharge outlets, the second named receptacle being removable from the first named receptacle, and a projecting handle on the second named receptacle for the purpose of turning or removing same, as described.

1,203,936. SCRAPER. VALENTINE STRUBHAR, Washington, Ill. Filed Feb. 23, 1916. Serial No. 79,851. (Cl. 15—2.)



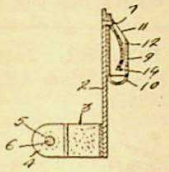
1. In a shoe scraper, a pair of spaced uprights, a bar extending at right angles to them and secured to each, its ends projecting beyond both, and a wire extending between the uprights and spaced above the bar and having terminal portions extending outwardly and downwardly at an angle and engaging the projecting ends of the bar and secured at their ends relatively to the uprights below said bar.

2. In a shoe scraper, a support, a cross-member secured relatively to it and extending beyond it at each side, a wire secured relatively to the support below the cross-member and extending upward and engaging the extended end of the latter, thence extending upward to the upper portion of the support, thence extending downward to and engaging the other extended end of the cross-member and secured relatively to the said support, said wire being spaced from the several parts of the structure to afford scraping portions for the shoe.

1,203,937. FLAG-HOLDER FOR AUTOMOBILES. TAYLOR K. SURFACE, Merna, Nebr. Filed May 3, 1916. Serial No. 95,127. (Cl. 248—37.)

1. A flag staff holder comprising a body plate having attaching means for securing the same to a support, a

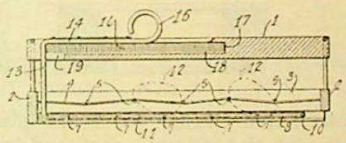
plurality of staff sockets pivoted to said plate, whereby said pockets may be adjusted in different angular positions, each of said sockets having yieldable clamping means to frictionally engage the staff to hold the same in different adjusted positions longitudinally through the socket.



2. A flag staff holder comprising a body plate, a plurality of tubular sockets, means for pivoting said sockets to the plate, whereby the sockets may be adjusted in different positions, each of said sockets having its upper open end beveled off, to permit the staff to be inserted, a leaf spring secured by said pivoting means and extending into the socket and designed to frictionally engage a staff to support the same in adjusted positions longitudinally through the socket.

3. A flag staff holder comprising a body plate, a plurality of tubular sockets, means for pivoting said sockets to the plate, whereby the sockets may be adjusted in different positions, each of said sockets having its upper open end beveled off, to permit the staff to be inserted, a leaf spring secured by said pivoting means and extending into the socket and designed to frictionally engage a staff to support the same in adjusted positions longitudinally through the socket, the lower end of each leaf spring being provided with a shoulder to be engaged by the lower extremity of the staff to support the same.

1,203,938. EGG-HANDLING DEVICE. JOSEPH ANDREW TERRIO, Ogdensburg, Wis. Filed Dec. 10, 1915. Serial No. 66,153. (Cl. 99—6.)

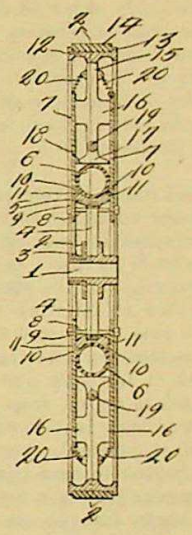


1. In an egg handling device of the described class, the combination of a rectangular frame, two sets of wires located at slight distances apart between such frame, each set comprising two series of wires, each series located at right angles to the other forming angular spaces for the reception of the eggs, means for normally retaining one set of wires out of vertical alinement with the other set, whereby the lower set of wires is adapted to support eggs in each of the angular spaces in the upper set, and means for manually bringing the wires of one set into vertical alinement with the other set, whereby eggs supported by said wires are free to be discharged therefrom.

2. In an egg handling device of the described class, the combination of a rectangular frame, two sets of wires located at slight distances apart between such frame, each set of wires comprising two series of wires, each series located at right angles to the other forming angular spaces between them for the reception of eggs, a spring, and a frame, for normally retaining one set of wires out of vertical alinement with the other set, whereby the lower set of wires is adapted to support eggs in each of the angular spaces of the upper set, and means for manually bringing the wires of one set into vertical alinement with the other set, whereby eggs supported by said wires may be discharged therefrom.

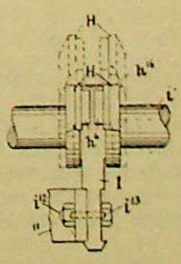
3. In an egg handling device of the described class, the combination of a rectangular frame, two sets of wires located at slight distances apart between such frame, each set of wires comprising two series of wires, each series located at right angles to the other forming angular spaces between them for the reception of eggs, a spring, and a frame for normally retaining one set of wires out of vertical alinement with the other set, whereby the lower set of wires is adapted to support eggs in each of the angular spaces of the upper set, a handle and a metallic frame for manually bringing the wires of one set into vertical alinement with the other set, whereby eggs supported by said wires may be readily discharged therefrom.

1,203,939. RESILIENT WHEEL. GEORGE W. THOMPSON, Springfield, Mo. Filed July 14, 1915. Serial No. 39,833. (Cl. 152—46.)



A resilient wheel comprising a hub having a hub rim provided with a seat for a pneumatic, a pneumatic in said seat, a pair of plates bolted together, one upon each side of the hub rim, the adjacent faces of said plates having annular shoulders to engage the annular edges of the hub rim partially between the pneumatic and the hub rim, the adjacent faces of the plates beyond the shoulders merging or curving into said shoulders partially under the sides of the pneumatic and forming continuations of the seat for the pneumatic, a wheel rim having an integral skeleton extension wheel frame operable between the two plates, said wheel frame comprising a plurality of radial spokes, each being thinner in diameter than the space between the two plates, said spokes at their inner ends terminating in enlargements of widths equal to the space between the plates and engaging said pneumatic and sliding against the adjacent faces of the plate, said spokes adjacent said seat having integral connections spaced at intervals from the pneumatic, said spokes substantially at their central portions having laterally extending parts to slide in contact with the adjacent faces of the plate, and resilient connections between the wheel rim and the outer peripheral edge of said plate.

1,203,940. EDGING-MACHINE FOR LUMBER. WILLIAM HENRY TROUT, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Mar. 5, 1910. Serial No. 547,388. (Cl. 143—164.)



1. The combination with a guide-rod of a guide-carrier having a non-rotatable hub and sliding freely upon said

guide rod and a saw-guide pivoted on the hub of said carrier.

2. The combination with a guide-rod of a guide-carrier sliding freely thereon and a pair of saw-guides pivoted on opposite sides of said carrier laterally separable and adapted to bear on opposite sides of the saw, and means for holding said guides immovable laterally when in normal operative position.

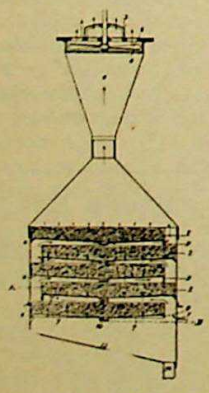
3. The combination of a guide-carrier having a pair of upstanding lugs on the inner side thereof, said lugs converging downwardly and having abrupt upper ends, and a pair of saw-guides pivotally mounted on said carrier and having corresponding oblique recesses, one on each saw-guide, fitting over said lugs and engaging the ends thereof when said carriers are in operative position; whereby a downward movement of either saw-guide is accompanied by an inward movement toward the face of the saw and an upward movement is accompanied by a retiring movement away from the saw.

4. A saw-guide comprising in combination a hub-member, and an arm-member rotatable thereon and having at its free end means adapted to bear against the face of a saw; one of said members having a helicoidal fin extending through a small angle, and the other a corresponding helicoidal recess adapted to interlock with said fin; the angle of obliquity and position of said fin and recess being such that said arm-member in rotating toward said saw is caused to approach it laterally and in rotating away from said saw is caused to depart from it laterally.

5. A saw-guide comprising in combination a hub-member, and an arm-member rotatable thereon and having at its free end means adapted to bear against the face of a saw; one of said members having a helicoidal fin extending through a small angle, and the other a corresponding helicoidal recess adapted to interlock with said fin; the angle of obliquity and position of said fin and recess being such that said arm-member in rotating toward said saw is caused to approach it laterally and in rotating away from said saw is caused to depart from it laterally; said helicoidal fin and recess being disengaged when said arm-member is turned through a certain angle from its bearing position, thereby leaving said arm member free and separable from said hub-member.

[Claims 6 to 8 not printed in the Gazette.]

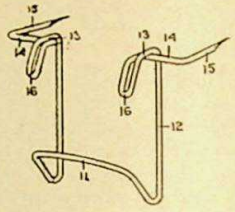
1,203,941. PROCESS FOR DRYING AND STERILIZING AIR. REINDER PIETERS VAN CALCAR, Oegstgeest, and JAN ELLERMAN and HENDRIKUS JOHANNES MARTIJN, The Hague, Netherlands. Filed Dec. 29, 1911. Serial No. 668,474. (Cl. 34—24.)



1. A process for drying and sterilizing air, which consists in directing the air upwardly through a suitable soluble drying substance arranged in distinct substantially horizontal layers, thus commingling the substance with the moist air to be dried, the resulting solution in a finely divided state falling through the layers in a direction opposite to that in which flows the current of air to be dried.

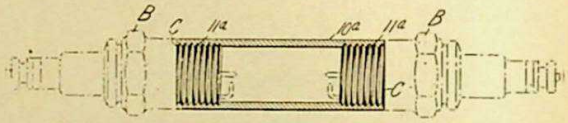
2. A process for drying and sterilizing air, which consists in directing the air upwardly through a suitable soluble drying substance and an anti-hardening material in distinct substantially horizontal layers, thus commingling the substance and material with the moist air to be dried, the resulting solution in a finely divided state falling through the layers in a direction opposite to that in which flows the air to be dried, and evaporating the solution and thereby recovering the mixture.

1,203,942. SAP-CUP HOLDER. JAMES OLDHAM WALKER, Pensacola, Fla. Filed June 13, 1916. Serial No. 103,435. (Cl. 248—27.)



A holder as characterized comprising a double-ended single piece of wire, said wire being bent for forming a pendent portion, said portion embodying vertical uprights laterally disposed, and a cross bar connecting the same, and extended outward from the plane thereof, a plurality of retaining hooks formed from said wire adjacent the pointed ends thereof, said hooks being adapted to extend over and in front of the rim of a sap cup, and loops directly connected with said uprights and extending above the wire contiguous to said pointed ends, for preventing the opening of the bends of said wire when supporting the weight of said cup.

1,203,943. SPARK-PLUG PROTECTOR AND CLEANER. ELMER G. WARE, Bisbee, Ariz. Filed Feb. 2, 1916. Serial No. 75,752. (Cl. 206—16.)



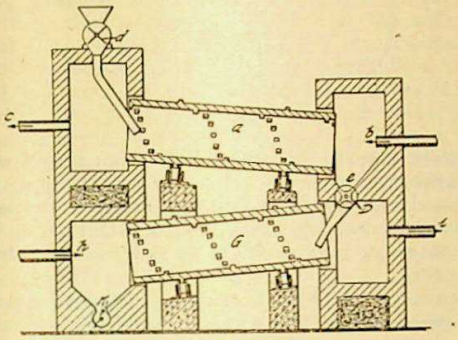
1. A protector and cleaner for spark plugs, including a hollow body open at both ends, each end being interiorly threaded, the threads being of a length and character to take directly onto the threaded portion of a spark plug, the end edges being adapted to make a fluid-tight contact with the shoulder at the threaded portion of the spark plug, said body constituting a chamber for a cleaning liquid between the said threaded portions.

2. A protector and cleaner for spark plugs, including a hollow body open at both ends, each end being interiorly threaded, the threads being of a length and character to take directly onto the threaded portion of a spark plug, the end edges being adapted to make a fluid-tight contact with the shoulder at the threaded portion of the spark plug, said body constituting a chamber for a cleaning liquid between the said threaded portions, the body furthermore having exteriorly thereon a zone forming a wrench-hold intermediate the ends of the body.

1,203,944. MEANS FOR HEATING GASES. JOSEF WEBER, Essen-on-the-Ruhr, Germany. Filed Mar. 13, 1916. Serial No. 83,938. (Cl. 34—26.)

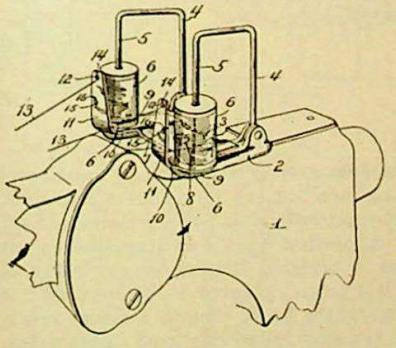
1. In means for heating gases, the combination of a pair of furnace heads each comprising an upper and a lower chamber each chamber having an opening therein; a pair of oppositely inclined ratary drums disposed one above the other converging toward each other, the ends of the upper drum being received by the respective openings of the upper chambers, while the ends of the lower drum are received by the corresponding lower openings; gas conduits entering the respective chambers; a substantially gas-tight seal between the chambers at the converging ends of the drums; and means for feeding solid particles to the upper drum.

2. In means for heating gases, the combination of a pair of furnace heads each comprising an upper and a lower chamber each chamber having an opening therein; a pair of oppositely inclined rotary drums disposed one above the other converging toward each other, the ends of the upper drum being received by the respective openings of the upper chambers, while the ends of the lower drum are received by the corresponding lower openings; gas conduits entering the respective chambers; a valve roller having recesses therein disposed between the chambers at the diverging end of the drums.



3. In means for heating gases, the combination of a pair of furnace heads each comprising an upper and a lower chamber each chamber having an opening therein; a pair of oppositely inclined rotary drums disposed one above the other converging toward each other, the ends of the upper drum being received by the respective openings of the upper chambers, while the ends of the lower drum are received by the corresponding lower openings; gas conduits entering the respective chambers; a substantially gas-tight seal between the chambers at the converging ends of the drums; means for feeding solid particles to the upper drum and projections on the inner face of the drums.

1,203,945. THREAD-GUIDE FOR SEWING-MACHINES. HENRIETTA T. WERDEN, New York, N. Y. Filed Feb. 16, 1915. Serial No. 8,537. (Cl. 242—140.)

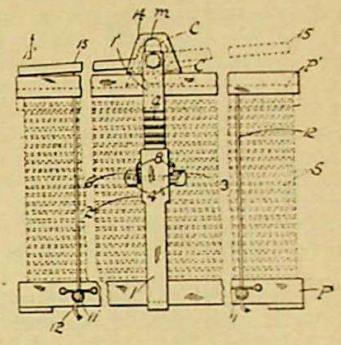


1. A thread guide for sewing machines, comprising a plate forming a spool rest and having a forwardly and inwardly projecting arm, and a flat guide post disposed at right angles to the forward end of said arm and provided with guide holes for thread, whereby said post will be disposed at right angles to a convergent line extending from the spool to the forward portion of a sewing machine head, and means for rigidly securing said plate to the sewing machine head.

2. A thread guide for sewing machines comprising a plate, means for rigidly securing said plate between its ends to the head of a sewing machine, and constituting a plurality of spool rests, an integral horizontal arm projecting from each spool rest, and guide posts integral with said arms and extending upwardly from their free ends.

3. A thread guide for sewing machines, comprising a plate, means for securing said plate to the head of a sewing machine and forming a plurality of spool rests, convergent horizontal arms projecting forwardly from said spool rests, and flat guide posts integral with the free ends of said convergent arms, said guide posts having guide holes for thread and having their flat faces at right angles to convergent lines extending from the respective spools to the forward portion of a sewing machine head.

1,203,946. PRESS. OSCAR F. WESTENHISER, St. Louis, Mo. Filed Oct. 11, 1915. Serial No. 55,212. (Cl. 100—57.)



1. In combination with a pair of members connected telescopically with one another, a rotatable catch operating to grip one of the members and prevent movement between the members in one direction, a spring for normally maintaining the catch in gripping engagement with its member, and means coupled to the spring on the member supporting the catch for maintaining the latter out of engagement with the opposite member.

2. In combination with a pair of members in movable relation to one another, a rotatable catch on one member operating for a certain position to grip the opposite member against movement in a given direction, a contracting spring for rotating the catch to gripping position, and a movable member coupled to the spring for maintaining the catch in releasing position when turned from its gripping position against the tension of the spring.

3. In combination with a pair of members in movable relation to one another, a movable catch on one member operating for a certain position to grip the opposite member against movement in a given direction, a contracting spring for moving the catch to gripping position, and means coupled to said spring for maintaining the catch in releasing position when moved from its gripping position against the tension of the spring.

4. In combination with a pair of press members in slidable relation to one another, a rotatable catch on one member operating for a given position to grip the opposite member against movement tending to separate the members, a contracting spring for rotating the catch to gripping position, and a locking latch or pawl coupled to the spring operating to maintain the catch out of its gripping position upon rotation of the catch through a given arc.

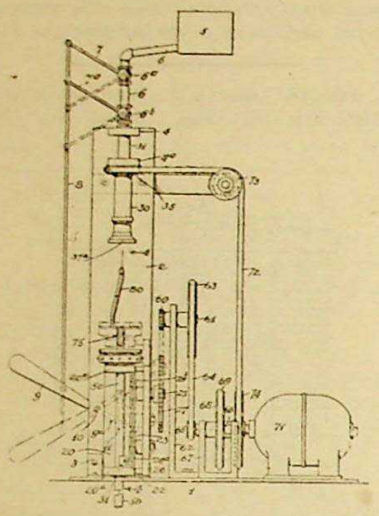
5. In combination with a pair of press members in slidable relation to one another, a rotatable catch on one member, a contracting spring for rotating the catch in a given direction to grip the opposite member against a separating movement of the members, a latch hinged to the member carrying the catch and coupled to the spring aforesaid, a wing carried by the catch and riding freely along the latch, the latter being provided with a recess for automatically engaging the edge of the wing under the resilient action of the spring, the catch being held out of its gripping position while engaged by the recess aforesaid.

[Claims 6 and 7 not printed in the Gazette.]

1,203,947. MACHINE FOR MAKING SEAMLESS CELLULOID ARTICLES. JOHN N. WHITEHOUSE, Newark, N. J. Filed Apr. 25, 1912. Serial No. 693,267. (Cl. 18—5.5.)

1. A machine for making seamless celluloid articles which comprises in combination a mold, a jet which delivers celluloid solution against said mold, means for rela-

tively rotating the mold and the jet and means for automatically reciprocating said mold and jet relatively to each other a number of times to cause the jet to cover the surface of the mold.



2. A machine for making seamless celluloid articles comprising in combination a hollow mold, a jet receivable into said mold for delivering celluloid solution against its interior, said jet and mold being relatively rotatable, and means for automatically reciprocating said mold and jet relatively to each other a number of times to cause the jet to cover the surface of the mold.

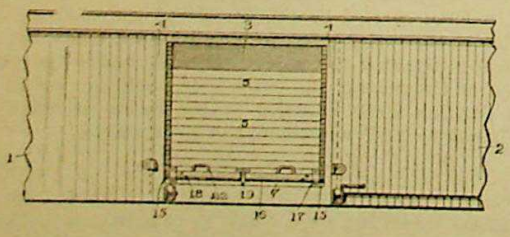
3. A machine for making seamless celluloid articles which comprises in combination a mold, a rotating jet which delivers celluloid solution against said mold, and means for reciprocating said mold and jet relatively to each other to cause the jet to cover the surface of the mold, and means which automatically stops said reciprocations after a determined number thereof has occurred.

4. A machine for making seamless celluloid articles comprising in combination a hollow mold, a rotating jet receivable into said mold for delivering celluloid solution against its interior, means for reciprocating said mold and jet relatively to each other to cause the jet to cover the surface of the mold, and means which automatically stops said reciprocations after a determined number thereof has occurred.

5. A machine for making seamless celluloid articles which comprises in combination a mold, a rotating jet which delivers celluloid solution against said mold, means for reciprocating said mold and jet relatively to each other to cause the jet to cover the surface of the mold, and means for automatically dividing off the supply of celluloid solution so that the jet delivers a quantity thereof proportionate to each article.

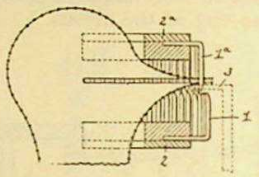
[Claims 6 to 8 not printed in the Gazette.]

1,203,948. GRAIN-CAR DOOR. JOHN WIEMER, San Jose, Ill. Filed Mar. 17, 1915. Serial No. 14,899. (Cl. 20—32.)



A grain car door adapted to rest on the floor of the car, said door comprising slats or sections, means for holding the slats or sections together, runways for the slats or sections extending up against the under side of the roof, a shaft mounted on the outside of the slats or sections, pinions on the shaft, and stationary racks on the outside of the car door posts where the contents of the car will not clog the same and with which the pinions mesh.

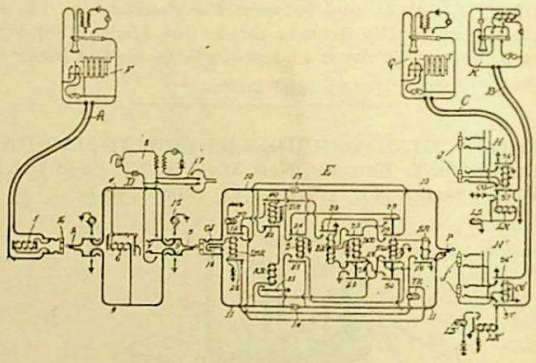
1,203,949. STITCH TRANSFERRING AND DOUBLING DEVICE. LOUIS N. D. WILLIAMS, Ogontz, Pa. Filed Jan. 27, 1916. Serial No. 74,566. (Cl. 66—32.)



1. A stitch transferring device comprising two sets of stitch engaging points, and carriers therefor, one of which can be folded over the other, the points being so disposed in said carriers that when one of the latter is so folded over the other the points will be in different longitudinal planes.

2. A stitch transferring device comprising two semi-annularly disposed sets of stitch engaging points one of longer radius than the other, and two semi-annular carriers for said points one of which can be folded over the other.

1,203,950. TOLL-TRUNK CIRCUIT. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1913. Serial No. 749,830. (Cl. 179—47.)



1. A telephone system comprising a local battery or magneto and common battery telephone lines, line circuits of different character for said lines, a universal toll trunk for extending connection from a calling line to said lines, as called lines, a bridging battery supply relay, a switching relay adapted when operated to connect said bridging relay in bridge of the trunk circuit, a sleeve relay, means for energizing the switching relay and sleeve relay when connection is made to a common battery line and for energizing the sleeve relay but not the switching relay when connection is made with a local battery line, and a guard signal for said trunk circuit operated responsive to such operations of the sleeve relay.

2. A telephone system comprising local battery or magneto and common battery telephone lines, line circuits of different character for said lines, a universal toll trunk for extending connections from a calling line to said lines as called lines, outgoing jack terminals for said trunk circuit and incoming terminals for said trunk for connecting to said line circuits, a bridging battery supply relay, a switching relay and circuit connections whereby said bridging relay may be connected in bridge of the incoming end of the trunk circuit, and means for energizing the switching relay when connection is made to a common battery line but where said relay is not energized when connection is made with a local battery line.

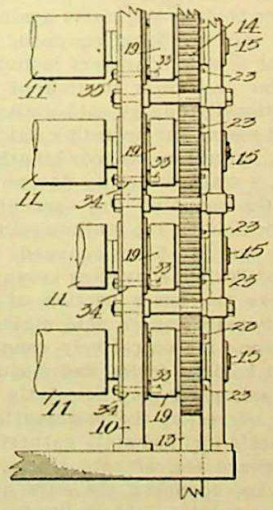
3. A ring-through universal toll trunk comprising an outgoing terminal and an incoming terminal, conductors uniting said terminals, condensers interposed in said conductors, a ringing relay in bridge of said conductors at the outgoing end thereof, said ringing relay being operated by ringing current when applied to the outgoing terminals of the trunk, and a shunting relay responsive to such operations of the ringing relay for short circuiting said condensers when the ringing current is applied.

4. A ring through universal toll trunk comprising outgoing and incoming terminals, conductors uniting said terminals, condensers interposed in said conductors, a ringing relay in bridge of said conductors at the outgoing end thereof, said ringing relay being operated by ringing current when applied to the outgoing terminals of the trunk, a shunting relay responsive to such operations of the ringing relay for short circuiting said condensers when the ringing current is applied so as to provide a more effective ring-through circuit, a bridging relay adapted to be connected in bridge of said conductors at the incoming end of the trunk circuit, means for connecting the bridging relay in such bridged connection, a disconnect relay having contacts included in the operating circuit of the ringing relay, and means for operating the disconnect relay controlled by said bridging relay.

5. A telephone system comprising lines of different characters, a cord circuit for extending a calling line to a universal toll trunk circuit said toll trunk circuit extending the calling line to the called lines of different characters, sleeve and switching relays in said toll trunk energized upon connection of the toll trunk with a common battery line, a source of battery supply, a bridging relay bridged across the toll trunk conductors when said switching relay is energized to connect said battery source with the trunk when said trunk is connected to a common battery line, and when said trunk is connected to a magneto line said switching and bridging relays remain inert whereby said battery source is not connected to the trunk circuit.

[Claims 6 to 11 not printed in the Gazette.]

1,203,951. BRAKING MECHANISM FOR PRESSES. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Mar. 6, 1912, Serial No. 681,921. Renewed Apr. 12, 1916. Serial No. 90,775. (Cl. 101—111.)



1. In a multiple deck printing press, the combination with a plurality of impression cylinders for the several decks of the press, a train of gearing for driving one of said cylinders at one end of the series, gears on each of said cylinder shafts, said last named gears meshing directly with each other in series, each of said gears being rotatable independently of the cylinder which it operates, and means for retarding the rotation of each cylinder independently of its gear and independently of the other cylinders.

2. In a multiple deck printing press, the combination with a plurality of impression cylinders, means for driving one of said cylinders, and means for driving the rest of the cylinders in series from the first one, of means arranged between the driving mechanism and each cylinder for retarding the rotation of that cylinder independently of the driving mechanism and of each other.

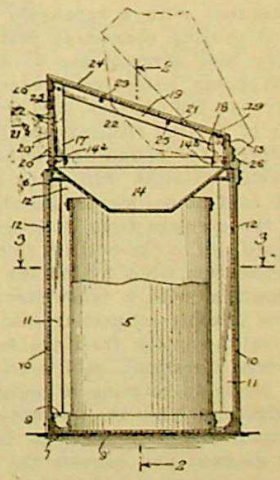
3. In a printing press, the combination with an impression cylinder, of a brake hub rotatable therewith, a brake band for the hub, an operating member for the brake band having an arm thereon, a rod for operating said arm, and yielding connections on both sides of the arm for connecting it with the rod.

4. In a printing press, the combination of a reciprocable operating rod, an oscillatable arm extending toward the rod, a spring on each side of the free end of the arm, each of said springs being connected with the rod, a non-circular brake operating member fixed with respect to the arm and oscillatable on the same axis as the arm, and a brake band in position to be operated by said operating member.

5. In a printing press, the combination with an impression cylinder, of a brake hub rotatable therewith, a brake band for the hub, and means for operating said brake band to grip the hub, said means comprising a cylinder, a piston therein, an oscillatable arm connected with said piston to be operated thereby, and yielding connections between the piston and arm on both sides of the arm.

[Claims 6 to 9 not printed in the Gazette.]

1,203,952. COLUMNAR BILL-BOARD AND REFUSE-CONTAINER. ALBERT H. WOODS, New York, N. Y. Filed Jan. 10, 1916. Serial No. 71,193. (Cl. 220—115.)



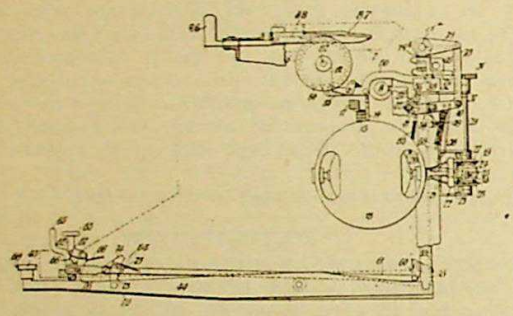
1. In a device of the kind described, in combination, a refuse can; a protecting structure including side walls so disposed that the can may be arranged between and spaced from said side walls; and a hinged cover for said structure including a roof, depending side walls for spacing the roof, above the top of the structure, said roof being sloped, a refuse-injection opening directly below the ridge of the roof-slope, and a dished floor wall for the cover, said floor wall having its concave side uppermost and being provided with a central discharge opening adapted to overlie the top of the refuse can when the cover is closed.

2. In a device of the kind described, in combination, a refuse can; a protecting structure including side walls so disposed that the can may be arranged between and spaced from said side walls; and a hinged cover for said structure including a roof, depending side walls for spacing the roof above the top of the structure, said roof being sloped, a refuse-injection opening directly below the ridge of the roof-slope, and a dished floor-wall for the cover, said floor wall having its concave side uppermost and being provided

with a central discharge opening of smaller diameter than the diameter of the refuse can and adapted to overlie the top of the refuse can when the cover is closed.

3. In a device of the kind described, in combination, an open-topped major container a side wall of which is established by a readily removable panel, a minor container located within and removable from the major container through a doorway established by the removal of said panel, and a second minor container located above and removable from the major container; said second minor container including a vertical opening at one end, a roof wall downwardly sloping away from said opening, a floor wall having a substantially central depression therein, and an opening at the bottom of the depression.

1,203,953. TYPE-WRITING MACHINE. WALTER WRIGHT, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Original application filed June 29, 1910, Serial No. 569,502. Divided and this application filed May 27, 1913. Serial No. 770,110. (Cl. 197—60.)



1. The combination with a typewriter carriage, of a motor, reversible gearing connecting said motor to said carriage, whereby said carriage can be driven in either direction by said motor, letter-feed mechanism controlling the forward travel of the carriage, said reversible gearing including a pair of driving elements rotating in opposite directions, a clutch for connecting either one of said elements in driving relation with said carriage, stops, keys to operate said stops, means operated by the said keys to release the carriage from letter-feed control, and a key movable into and out of position to cause a reversal of the clutch connection when a stop key is operated.

2. The combination, with a typewriter carriage; of a motor; reversible gearing connecting said motor to said carriage, to drive the latter from the former in either forward or reverse direction; said gearing including a pair of driving elements rotating in opposite directions; a clutch normally connecting the forward-driving element in driving relation with said carriage, but shiftable to disconnect that element and connect the reverse-driving element; means for shifting said clutch; a stop on said carriage; a counter-stop to co-act therewith; and a key for simultaneously moving said counter-stop into effective position and operating said clutch-shifting means.

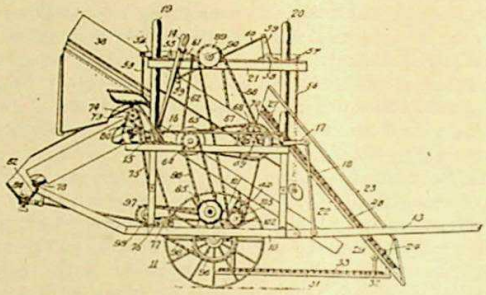
3. The combination with a typewriter carriage, of a motor, reversible gearing connecting said motor to said carriage, whereby said carriage can be driven in either direction by said motor, said reversible gearing including a pair of driving elements rotating in opposite directions, a clutch for connecting either one of said elements in driving relation with said carriage, means for shifting said clutch, and means for rendering said last-mentioned means operative or inoperative to shift said clutch.

4. The combination with a typewriter carriage, of a motor normally connected to drive said carriage in one direction, keys, means operated by said keys for reversing the movement of said carriage, means controlled by said keys for selectively determining the extent of movement of said carriage in either direction, a controlling key, and means operated thereby to prevent the operation of said reversing means by said first-named keys.

5. The combination with a typewriter carriage, of a motor, reversible gearing connecting said motor to said carriage, whereby said carriage can be driven in either direction by said motor, means for restraining said carriage from movement in one direction, and permitting movement of said carriage in the opposite direction, a key operable to release the carriage from said restraining means and operate said reversible gearing to reverse the direction of the carriage travel, a second key, and means operated thereby to prevent operation of the reversible gearing by said first-mentioned key.

[Claims 6 to 87 not printed in the Gazette.]

1,203,954. CORN-HARVESTER. HERBERT B. WYCKOFF, Centerville, Iowa. Filed Sept. 19, 1912. Serial No. 721,193. (Cl. 56—112.)



1. In a corn harvester, the combination of a wheeled carrying frame, a supporting frame suspended therefrom, an upwardly inclined stalk gathering device comprising a pair of endless conveyers mounted on said frame, an upwardly inclined guiding device comprising an endless conveyer mounted on said frame below the gathering device, a snapping device for removing the corn from the stalks, means for holding the stalks against upward movement while the ears are being snapped, said means comprising a pair of opposed endless flexible members, mounted in a horizontal plane adjacent to the ground on said supporting frame, adapted to frictionally engage said stalks near the lower end thereof and means for operating said parts.

2. In a corn harvester, the combination of a wheeled carrying frame, a stalk gathering device mounted on said frame, means for snapping the ears of corn from the stalks, means for holding the stalks against upward movement while the ears are being snapped, said means comprising a pair of flexible conveyers mounted in a horizontal position near the lower portion of said frame and adapted to frictionally engage said stalks near the lower end thereof and means for operating said parts.

3. In a corn harvester, the combination of a wheeled carrying frame, a stalk gathering device mounted on said frame, means for snapping the ears of corn from the stalks, means for holding the stalks against upward movement while the ears are being snapped, said means comprising a pair of flexible conveyers mounted in a horizontal position near the lower portion of said frame and adapted to frictionally engage said stalks near the lower end thereof, means for operatively connecting the snapping device and holding device and means carried by the frame whereby said parts may be jointly operated.

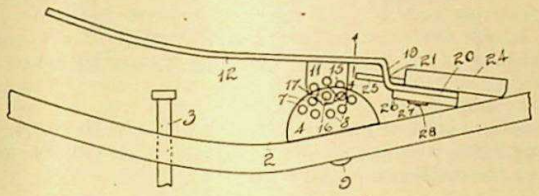
4. In a corn harvester, the combination of a carrying frame, an upwardly inclined stalk gathering device mounted near the forward end of said frame, means mounted on said frame for snapping the ears of corn from the stalks, means for holding said stalks from upward movement while the ears are being snapped, said means comprising a pair of endless conveyers arranged in a horizontal position and adapted to travel over sprocket wheels supported from said frame and gathering device and means for operatively connecting said parts to a suitable power mechanism carried by said frame.

5. In a corn harvester, means for snapping the ears of corn from the stalks and means for holding the stalks

against upward movement while the ears are being snapped said means comprising a pair of engaging members mounted in a horizontal position near the lower portion of the harvester and adapted to frictionally engage the stalks near the lower end thereof.

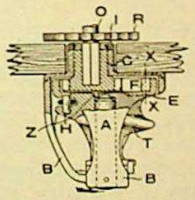
[Claim 6 not printed in the Gazette.]

1,203,955. AUTOMOBILE-ACCELERATOR PEDAL. BENJAMIN D. ADAMS, Galesburg, Ill. Filed Oct. 13, 1913. Serial No. 794,840. (Cl. 74—81.)



The combination with an engine control element adapted to be moved by pressure, of a foot pedal mounted to be engaged by the foot of the user and operated to apply pressure to said element, said foot pedal including a mounting longitudinally adjustable with respect to the element, a bracket pivotally connected with the mounting, a foot plate having longitudinally adjustable connection with the bracket and having its forward portion normally overlying the element, and a heel plate adjustably connected to the foot plate beyond the pivotal connection with relation to the element, the mounting of the heel plate together with the latter normally maintaining the pedal in position to space its operative end from the element.

1,203,956. BRAKE MECHANISM FOR VEHICLES. GIUSEPPE SACCO ALBANESE, Paris, France, assignor to Ethel L. Noble, Brooklyn, N. Y. Filed May 2, 1913. Serial No. 765,021. (Cl. 188—59.)

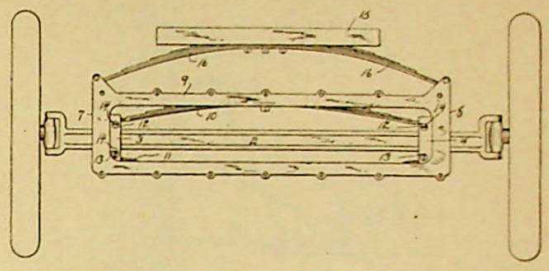


1. In a brake mechanism, a winding drum supported on a seating provided by the base of a body portion and means consisting of a stop on the lower extremity of the drum engaging a stop on said seating and an intermediate loose ring having a lug for limiting the unwinding movement of the winding drum.

2. In a brake mechanism, the combination of a body portion supporting a winding drum mounted on a stud shaft, internal gearing and a pinion provided within the hollow crown of the winding drum for driving the same and means consisting of a stop provided on the lower extremity of the winding drum engaging a loose lug which in turn engages a fixed stop carried by said body portion for limiting the unwinding movement of the winding drum.

3. In a brake mechanism, the combination of a body portion supporting a winding drum mounted on a stud shaft, means for driving said drum which include an internal gearing provided within the hollow crown of the drum and a pinion carried by a plate secured to the body portion and means for limiting the unwinding movement of the drum consisting of a stop provided on the lower extremity of the winding drum which stop engages a lug provided on a ring which is free to rotate on the said stud shaft and which lug engages a stop provided on the body portion of the brake mechanism.

1,203,957. VEHICLE-AXLE. JOHN ANDERSON, Portland, Conn. Filed Feb. 21, 1916. Serial No. 79,566. (Cl. 21—97.)



1. The combination with a vehicle axle, of blocks secured near opposite ends thereof, a housing through which the axle extends and in which it is permitted to have vertical movement, the said blocks bearing against the opposite end walls of the said housing.

2. The combination with a vehicle axle, of blocks secured near opposite ends thereof, the outer faces of said blocks formed with cam surfaces, combined with a housing through which the axle extends and in which it is permitted to have vertical movement the cam edges of the blocks engaging with the end walls of the housing.

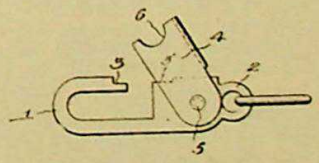
3. The combination with a vehicle axle, of blocks secured near opposite ends thereof, a housing through which the axle extends and in which it has vertical movement, anti-friction rollers mounted in the end walls of the housing and against which the outer faces of the blocks engage.

4. The combination with a vehicle axle, of blocks secured near opposite ends thereof, a housing through which the axle extends, the outer faces of the blocks adapted to engage with the end walls of the housing, and a spring interposed between the upper surface of the axle and the top of the housing.

5. The combination with a vehicle axle, of blocks secured near opposite ends thereof, a housing through which the axle extends, the outer faces of the blocks adapted to engage with the end walls of the housing, and a spring interposed between the under surfaces of the axle and the bottom of the housing.

[Claims 6 and 7 not printed in the Gazette.]

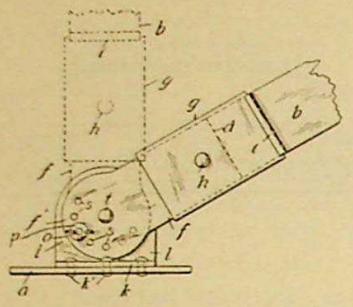
1,203,958. SNAP OR CATCH. SAMUEL ANDERSON, Pawtucket, R. I. Filed Mar. 24, 1916. Serial No. 86,379. (Cl. 24—232.)



1. In a catch, a hook member having a hook on one end and eye on its other end, the bill of the hook and the side edge of the member opposite to the bill being each formed with an outwardly facing cut-out, and a keeper having a part of U-form in cross section pivoted to the eye end of the hook member and having its ends receivable in the cut-outs, said keeper having its inner end formed with U-shaped cut-outs whereby if the chain moves to a position to engage the keeper, the cut-outs of the latter will deflect the chain to a position where the chain will engage the hook.

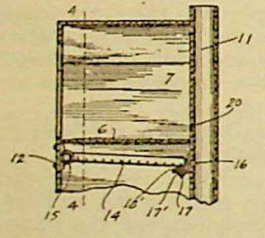
2. In a catch, a hook member having a hook at one end terminating in a bill directed toward the body portion of said hook member, said body portion and hook bill being formed with outwardly facing cut-outs and the walls of which oppose each other, and a keeper pivoted to the body portion for seating in the cut-outs of the latter and hook bill, said keeper when in operative position abutting the end walls of the cut-outs whereby to reinforce the hook against being sprung transversely of the body portion.

1,203,959. MEANS FOR ATTACHING HANDLES TO IMPLEMENTS. EDWARD M. ATKINSON, Portland, Oreg. Filed June 7, 1915. Serial No. 32,791. (Cl. 145—79.)



In an implement, a handle provided with chamfered edges on one end, a longitudinal slot in the handle intermediate said chamfered edges, an inner-holding strip inserted in said slot, outer parallel holding strips on each side of the handle, a ferrule encompassing the handle around said outer strips, a fastening element connecting the ferrule, holding strips and handle, the upper edges of the outer holding strips being turned over the upper edge of the ferrule, an implement head, and means for rigidly connecting the holding strips and the head.

1,203,960. BURNER AND OVEN. EDWIN D. BAXTER, Mansfield, Ohio, assignor to The Baxter Stove Company, Mansfield, Ohio, a Corporation of Ohio. Filed June 5, 1915. Serial No. 32,421. (Cl. 126—39.)

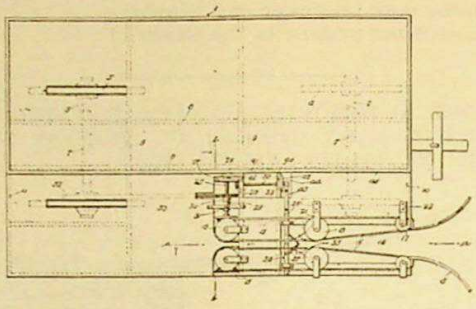


1. An oven including a bottom and side walls, an escape flue having communication with the interior of the oven near the bottom of the latter, a burner arranged exteriorly of the oven and beneath the bottom, said burner extending toward the flue and inclining downward toward the flue from the front end of the oven to the rear, whereby that portion of the burner closest to the communication between the flue and oven is spaced the greatest distance from the oven bottom.

2. An oven including a bottom and side walls, an escape flue having communication with the interior of the over near the bottom of the latter, a burner arranged exteriorly of the oven and beneath the bottom, said burner extending toward the flue and inclining downward toward the flue from the front end of the oven to the rear, the burner being formed with fuel outlets to direct the fuel toward the side walls of the oven, but downwardly with respect to the bottom thereof.

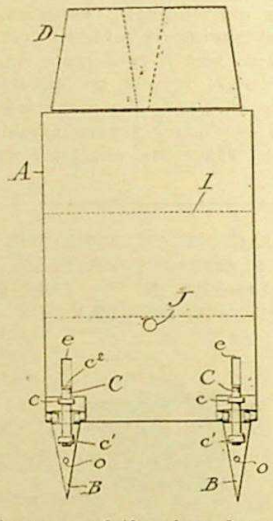
1,203,961. KAFIR-CORN HEADER. LEROY L. BEARDSLEY, Forgan, Okla. Filed June 29, 1915. Serial No. 36,988. (Cl. 56—131.)

A grain header adapted to be applied to the running gear of a wagon comprising a rack body having a platform located beyond one of its sides and at the same level as the bottom of the body, said platform being provided at its end with a runway, a cutting apparatus mounted upon the platform at the runway, stalk gathering and conveying means mounted on the platform and extending behind the cutting apparatus, and means for operating the cutting apparatus and the stalk gathering and conveying means and including a clutch mechanism having a lever disposed above the platform and the edges thereof, there being sufficient area at the rear portion of the platform to permit an operator to stand and transfer the material which is delivered by the stalk conveying means upon the platform from the platform to the rack body, and the adjacent side wall of the rack body serving as a



fender to prevent the material deposited in the body from contacting with the stalk gathering and conveying means and the cutting apparatus.

1,203,962. ARMORED VEHICLE. DAVID H. BELLAMORE, New York, N. Y., assignor to The Standard Ordnance Corporation, New York, N. Y., a Corporation of New York. Filed Oct. 24, 1914. Serial No. 868,373. (Cl. 89—36.)



1. In a structure of the class described, a land vehicle, in combination with a plurality of manually portable, bullet-proof units of substantially the same size, arranged side by side along the side of the vehicle, separate means, coöperating with the units separately, for individually and detachably mounting each of said units on the vehicle independently of the others, whereby any one, or a plurality, of said units may be detached from the vehicle, for use in the field as a bullet-proof shield, without interfering with the remaining units.

2. In a structure of the class described, a land vehicle, in combination with a plurality of manually portable, bullet-proof units, and means, mounted upon each of said units, for separately and detachably mounting them side by side upon the vehicle, said means being also adapted to support the units in upright position, when the same are removed from the vehicle for use in the field as bullet-proof shields.

3. In a structure of the class described, a land vehicle, in combination with a plurality of manually portable, bullet-proof units arranged side by side along the opposite edges of the vehicle, and supporting means mounted on eacn of said units and coöperating with the vehicle for individually securing each of the units to the vehicle in normally upright position, said means being independent of the means for maintaining the adjacent units in upright position.

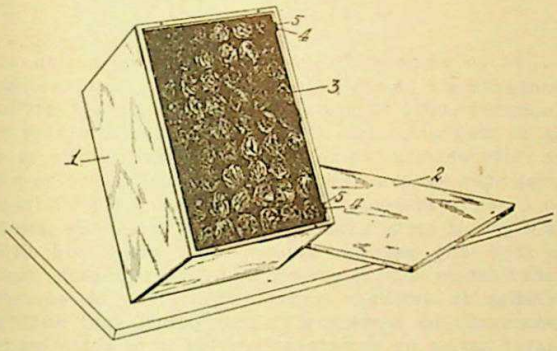
4. In a structure of the class described, a land vehicle, in combination with a plurality of manually portable,

bullet-proof units arranged side by side along the opposite edges of the vehicle, and supporting means mounted on each of said units and coöperating with the vehicle for individually and detachably securing each of the units to the vehicle in normally upright position, said means being independent of the means for maintaining the adjacent units in upright position, and said securing means being capable of supporting the units in upright position when the same are removed from the vehicle and used in the field as bullet-proof shields.

5. In a structure of the class described, a land vehicle, in combination with a plurality of manually portable, bullet-proof units arranged side by side along the opposite edges of the vehicle, supporting means mounted on each of said units and coöperating with the vehicle for individually securing each of the units to the vehicle in normally upright position, said means being independent of the means for maintaining the adjacent units in upright position, and means, independent of the supporting means, for preserving substantial alinement of the units.

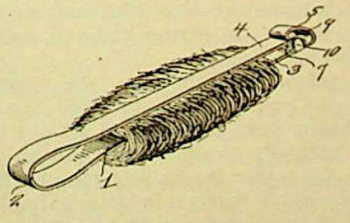
[Claims 6 to 20 not printed in the Gazette.]

1,203,963. DISPLAY-PACKAGE. ROBERT I. BENTLEY, Jr., San Jose, Cal., assignor to Muirson Label Company, San Jose, Cal., a Corporation of California. Filed Nov. 23, 1915. Serial No. 62,972. (Cl. 217—56.)



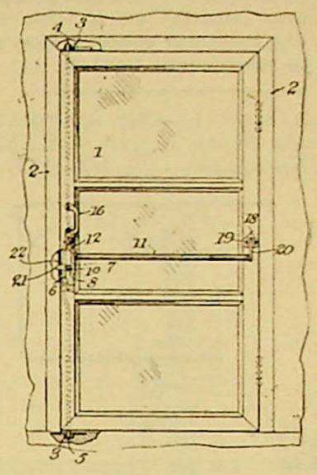
A display-package comprising a container having a cover; an opaque display-cover having on its face a pictorial representation of an orderly arranged layer of the contents of the container; and means for removably supporting said display cover in a fixed plane within the top of said container under its cover and directly above and completely covering its contents.

1,203,964. HAIR-CURLER. EVERARD BLACKSHEAR, Citra, Fla. Filed June 1, 1916. Serial No. 101,085. (Cl. 132—18.)



A new article of manufacture consisting of a curler constructed of a single length of elongated spring sheet metal bent upon itself substantially midway its ends forming arms which are bent laterally from each other and diverging, the terminal portion of one of the arms being bent upon itself to form a loop, the extremity of said bent portion being riveted to the arm, said loop being bent upon itself to overlie the extremity of the other arm, when pressed toward the first arm, the extremity of the arm having a loop being provided with ears bent toward and adjacent the sides of the loop, thereby preventing lateral movement of the arm with its extremity underlying the loop.

1,203,965. FIRE-DOOR. JOHN BOGENBERGER, Milwaukee, Wis. Filed Mar. 10, 1915. Serial No. 13,343. (Cl. 70—120.)



In a device of the described class, the combination with a door, of a pair of fastening bolts, the upper of said bolts being formed of tubing and the lower of solid metal, the lower of said bolts being heavier than the upper, whereby owing to the greater weight of the solid bolt it is adapted to move downwardly and throw the other bolt upwardly, a pair of rack bars connected with the inner ends of both of said bolts, a pinion revolubly supported in mesh with the teeth of said rack bars, an operating handle, an arm provided with an elongated slot for connecting said door with the upper of said fastening bolts, two additional arms for connecting said operating handle at its respective ends with said door, one of said handle supporting arms being connected with said slotted arm, and the other pivotally connected directly to said door, whereby as said handle is moved downwardly both of said bolts will be simultaneously moved outwardly and brought into their locking position as soon as the door is closed, substantially as and for the purpose specified.

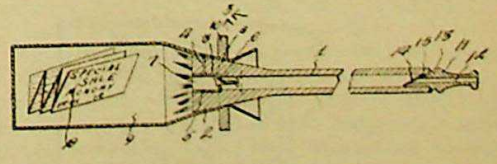
1,203,966. VULCANIZATION. AUGUSTUS O. BOURN, Bristol, R. I. Filed Jan. 7, 1916. Serial No. 70,876. (Cl. 106—23.)

1. The improved process for vulcanizing which consists in mixing wood creosote, rubber substitutes, and rubber compound and subjecting the whole to a vulcanizing heat.

2. An improved process for vulcanizing which consists in mixing wood creosote, partially vulcanized vegetable oils and rubber compound, and subjecting the whole to a vulcanizing heat.

3. An improved process for vulcanizing which consists in mixing reclaimed rubber, rubber compound and creosote and vulcanizing the whole.

1,203,967. ADVERTISING TOY. BENJAMIN S. BOWERS, La Prairie, Minn. Filed May 17, 1916. Serial No. 98,126. (Cl. 46—46.)

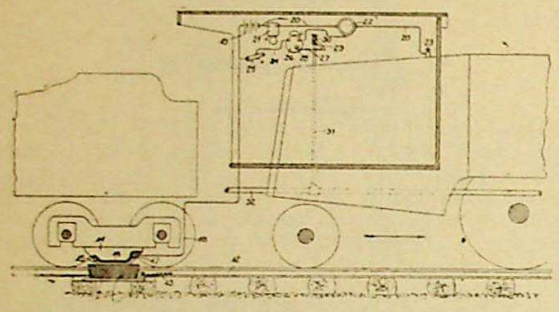


1. In an article of manufacture, the combination of a tubular member having a check valve in one end and a tone reed secured in the opposite end, of a paper bag detachably clamped to the end having the check valve, whereby as air passes through the tubular member, the tone reed creates a noise and the bag is filled with air, which bag may be subsequently bursted.

2. In an article of manufacture, the combination of a tubular member having a conical enlargement at one end

and a tone reed secured in the opposite end, of a check valve in the conical enlargement, a bag, through the open end of which the conical enlargement is inserted, a disk ring to clamp the sides of the open end of the bag on the conical enlargement, whereby air is blown through the tubular member the tone reed creates a noise and fills the bag, which may be subsequently bursted.

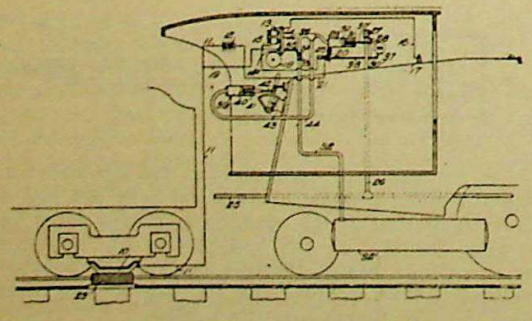
1,203,968. CAB-SIGNAL AND AUTOMATIC STOP. MELBERN BERNIE BULLA, El Paso, Tex. Filed Nov. 5, 1914. Serial No. 870,438. (Cl. 246—58.)



1. In a device of the character set forth, the combination of a main electric circuit including a battery, means along the track to close the circuit adjacent the battery, a branch circuit connected with the main circuit on opposite sides of the battery, an audible signal, one connection between the main and branch circuits being an automatic circuit closer, the closing of the main circuit from the track serving to initiate the sounding of the audible signal and the action of the automatic circuit closer to connect the branch circuit to continue such audible signal after it is initiated, clock mechanism in the branch circuit, said clock mechanism including a rotary shaft and a magnet armature normally holding the clock shaft from rotation but releasing the same when the branch circuit is closed and the energy of the battery is continued through the audible signal, a normally closed air line and a flexible connection between said clock shaft and the air line causing the air line to be opened as a result of the operation of the clock shaft.

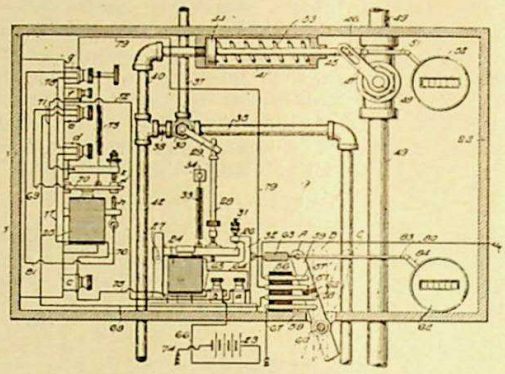
2. In an automatic signal device for locomotive cabs, the combination of a battery, an alarm bell connected with the battery, means to close a circuit at specified times to initiate the ringing of the bell, a branch circuit connecting the main circuit on opposite sides of the battery and bell, a circuit closer causing the current to pass through the branch circuit when the alarm bell ringing is initiated, clock mechanism located in the branch circuit including a rotating stem, a normally closed air cock, and connections between the air cock and the rotating stem whereby the air cock will be opened at a predetermined time after the ringing of the bell is initiated.

1,203,969. AUTOMATIC TRAIN-STOP. MELBERN B. BULLA, El Paso, Tex. Filed Sept. 9, 1915. Serial No. 49,740. (Cl. 246—58.)



In an automatic train stop, the combination with a train line, a valve normally closing the train line and a compressed air motor connected to the valve for opening the same, of a bleeder valve connected to said motor and having an arm constituting a normally closed switch, electric means to initiate the operation of the motor and including said switch, and a register connected for operation from said switch to indicate the number of times the bleeder valve is opened.

1,203,970. AUTOMATIC TRAIN-STOP. MELBERN B. BULLA, El Paso, Tex. Filed Nov. 10, 1915. Serial No. 60,715. (Cl. 246—58.)



1. In an automatic train stop, the combination of a compressed air pipe, a valve to normally close the same, a normally closed electric circuit including a magnet having an armature, connections between the armature and the valve whereby the valve is held closed, power means acting upon the armature tending to open the valve when the circuit is broken, said normally closed circuit including a pair of contact springs and a switch blade connecting them, and means to automatically break said circuit when a danger point is passed, said circuit breaking means including an auxiliary magnet adapted to be energized momentarily by passing a danger point, said auxiliary magnet having an armature carrying a movable contact point serving to establish a new circuit through said auxiliary magnet on the breaking of the normally closed circuit, said new circuit being adapted to be broken subsequently by the movement of said switch blade from between the contact springs.

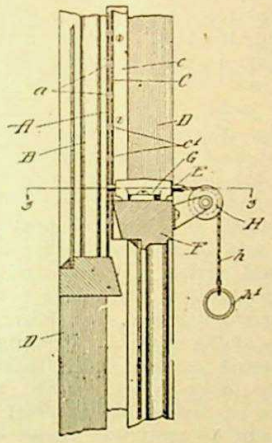
2. In an automatic train stop, the combination of an air line, a valve normally closing the same, power means tending to open said valve, means including a normally closed circuit overcoming the normal tendency of the power means, means to automatically break said circuit when a danger point is passed, permitting the power means to open the valve, means under the control of the engineer for neutralizing the effect of the circuit breaking means, and independent recording devices connected respectively to said valve means and the means under the control of the operator.

3. In an automatic train stop, the combination of a compressed air pipe, a valve to close the same, power means tending to open the valve to set the brakes, means including a normally closed circuit and an electromagnet to overcome the power means and thereby hold the valve closed, a locomotive battery in said normally closed circuit, an auxiliary magnet, means in addition to said locomotive battery to energize and initiate the action of the auxiliary magnet when a danger point is passed and thereby break the normally closed circuit permitting the power devices to be effective to open the air pipe, connections being provided to cause the energy of the auxiliary magnet to be continued through the locomotive battery after the point of initiation is passed, means including a movable switch blade and contact springs coöperating therewith enabling the engineer to break the curcuit through the auxiliary magnet to restore the parts to normal position, and a pair of independent recording devices connected respectively to said valve and said movable switch blade whereby the acts of opening the valve and causing the same to

be restored to closed position will be independently recorded.

4. In an automatic train stop, the combination of an air line, a valve to normally close the same, automatically operated power means tending to open the valve, electric devices including a normally closed circuit acting to overcome the tendency of the power means, thereby holding the valve closed, said normally closed circuit including a pair of contact springs and a movable switch blade cooperating with the same, an auxiliary magnet, means to energize the auxiliary magnet and maintain it energized, the energizing being initiated by passing a danger and subsequently continued through the same source of energy as is included in the normally closed circuit, the initiating means including a second pair of contact springs coöperating with the aforesaid switch blade, said switch blade being movable to different distances to separate either one pair of contact springs to prevent the setting of the brakes or both pairs of contact springs to restore the parts to normal position after the brakes have been set, and recording means connected to said switch blade to make a record of the movements thereof by the engineer.

1,203,971. AUTOMATIC WINDOW-LOCKING DEVICE. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Apr. 6, 1912. Serial No. 689,099. (Cl. 16—119.)

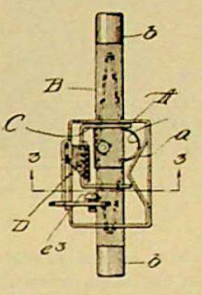


1. A window-sash-lock comprising a movable strip secured to the upper sash, a stationary strip secured to the window-frame, each of said strips having a series of openings therein, a bolt mounted on the lower sash and arranged to extend first through the frame-strip and then through the sash-strip, so that the upper sash can be moved without unlocking the lower sash, and a spring for holding said bolt in locking position, said strips being disposed in parallel vertical planes between the planes of the glass of the two sashes, and said bolt being arranged crosswise of the top of said lower sash.

2. A window-sash-lock comprising a movable strip secured to the upper sash, a stationary strip secured to the window-frame, each of said strips having a series of openings therein, a bolt mounted on the lower sash and arranged to extend first through the frame-strip and then through the sash-strip, so that the upper sash can be moved without unlocking the lower sash, and a spring for holding said bolt in locking position, a connection attached to said bolt and arranged to hang downward, so that the bolt can be held out of engagement with the frame-strip while the lower sash is being raised, and means to support said connection.

3. A window-sash-lock comprising a movable strip secured to the upper sash, a stationary strip secured to the window-frame, each of said strips having a series of openings therein, a bolt mounted on the lower sash and arranged to extend first through the frame-strip and then through the sash-strip, so that the upper sash can be moved without unlocking the lower sash, and a spring for holding said bolt in locking position, said strips being disposed in parallel vertical planes between the planes of the glass of the two sashes, and said bolt being arranged crosswise of the top of said lower sash, said frame-strip being of angle-iron form and having a flange secured to the window-frame between the sides of the two sashes, and the two vertical series of openings registering with each other when the sashes are locked together.

1,203,972. ELECTRICAL SWITCH. MORTON G. BUNNELL, Chicago, Ill., assignor to New Era Mfg. Co., Chicago, Ill. Filed Sept. 6, 1912. Serial No. 718,849. (Cl. 175—284.)



1. A jump-switch comprising a metal frame (A), a push-button (B) having ends (b) and a middle portion (b^1), a U-shaped slide (C) on said push-button, a contact-strip (D) carried by and insulated from said slide, a pair of contacts (E) secured to and insulated from one side of said frame, to engage said contact-strip, a cam (a) on the other side of said frame, and a spring (b^2) in said push-button to engage said cam and thereby operate the switch with a jump-motion in either direction.

2. A jump-switch comprising a metal frame (A), a push-button (B) having ends (b) and a middle portion (b^1), a U-shaped slide (C) on said push-button, a contact-strip (D) carried by and insulated from said slide, a pair of contacts (E) secured to and insulated from one side of said frame, to engage said contact-strip, a cam (a) on the other side of said frame, and a spring (b^2) in said push-button to engage said cam and thereby operate the switch with a jump-motion in either direction, said middle portion (b^1) being shorter than said slide (C) and located between the ends thereof to provide lost motion between said push-button and said contact-strip.

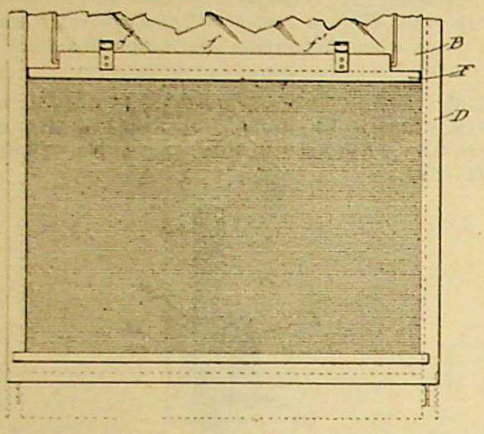
3. A jump-switch comprising a metal frame (A), a push-button (B) having ends (b) and a middle portion (b^1), a U-shaped slide (C) on said push-button, a contact-strip (D) carried by and insulated from said slide, a pair of contacts (E) secured to and insulated from one side of said frame, to engage said contact-strip, a cam (a) on the other side of said frame, and a spring (b^2) in said push-button to engage said cam and thereby operate the switch with a jump-motion in either direction, said spring (b^2) projecting from said middle portion, and said slide (C) engaging the ends of said frame to limit the motion of said push-button and said contact-strip.

1,203,973. ROLLING-WINDOW-SCREEN-ATTACHING DEVICE. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed May 25, 1914. Serial No. 840,683. (Cl. 156—39.)

1. A rolling window screen provided with a roll disposed in the plane of the sash, below the lower edge of the latter, and having a sheet metal strip secured to the upper portion thereof, the edge of said strip being turned over to form a hooking flange, and means for engaging the hook thus provided on the screen, carried on the window sash, said flange and means being separable to permit disconnection of the screen from the sash.

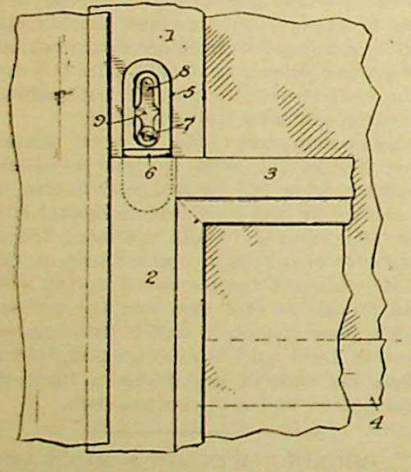
2. A rolling window screen having a sheet metal strip secured to the upper portion thereof, the edge of said strip being turned over to form a hooking flange, and means for engaging the hook thus provided on the screen, carried on the window sash, said flange and means being separable to permit disconnection of the screen from the sash, said means comprising a sheet metal strip with its

upper edge turned over to form a curved portion similar to said flange, the screen being secured to the inner surface of the first mentioned strip and in the plane of the body portion of said other strip.



3. A rolling window screen provided with a roll disposed in the plane of the sash, below the lower edge of the latter, and having a sheet metal strip secured to the upper portion thereof, the edge of said strip being turned over to form a hooking flange, and means for engaging the hook thus provided on the screen, carried on the window sash, said flange and means being separable to permit disconnection of the screen from the sash, said means including a strip of sheet metal secured to the sash, disposed with the lower edge thereof adjacent the upper edge of the screen and in the plane thereof, the sash strip having its upper edge bent toward the window glass to form a rest for said flange in the plane of the sash.

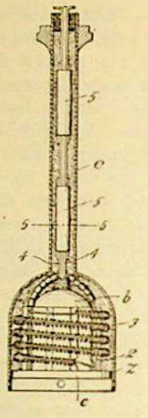
1,203,974. WINDOW-LOCK. JOSEPH E. CALLOW and DIRK KROES, Milwaukee, Wis. Filed July 22, 1915. Serial No. 41,213. (Cl. 16—18.)



In a device of the described class, a metallic bracket comprising a vertical plate provided with a vertical slot enlarged near its center for the reception of a screw head, and a horizontal lug projecting from the front side of said plate adapted to bear upon the upper rail of the lower sash, in combination with a screw having its front end in said slot, its opposite end being adapted to be inserted in one of the vertical rails of the upper sash, the enlarged center of said slot being such as to permit said bracket to be withdrawn over the head of said screw.

1,203,975. ELECTRICAL HEATER. FREDERICK E. CARLSON, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 28, 1914. Serial No. 879,265. (Cl. 219—41.)

1. In a device of the character described, spaced shells, an electrical heater located between the shells, insulating means for holding it out of contact with said shells and a comminuted packing filling the space between said shells and entirely surrounding and embedding said heater.



2. In a device of the character described, spaced shells, an electrical heater located between the shells, insulating means for holding it out of contact with said shells and a comminuted packing of insulating material filling the space between said shells and entirely surrounding and embedding said heater.

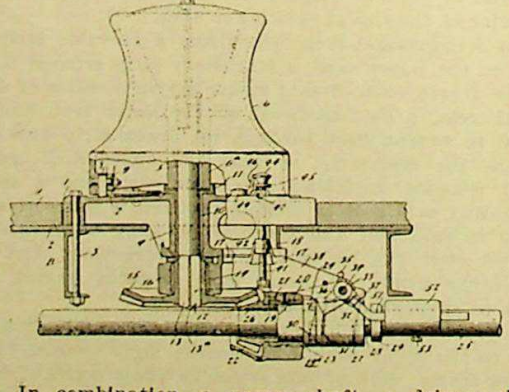
3. In a device of the character described, spaced shells, an electrical heater located between the shells, insulating means for holding it out of contact with said shells and a packing of finely divided granular material filling the space between said shells and entirely surrounding and embedding said heater.

4. In a device of the character described, a pair of spaced cupped shells nested together and secured together at their edges, the outer shell having an opening in its top, a tubular stem with an end secured in said opening to said outer shell, an electrical heater located in the space between said shells, means for holding it out of contact with said shells, and a comminuted packing of insulating material filling the space between said shells and entirely surrounding and embedding said heater.

5. In a device of the character described, a pair of cup-shaped shells nested together and with their walls spaced apart and their lower edges secured together, a comminuted packing of insulating material filling the space between the shells, an electrical heater embedded in said packing, and a tubular sleeve connected between the walls of said shells.

[Claims 6 to 10 not printed in the Gazette.]

1,203,976. CLUTCH DEVICE. FRITIOF CARLSSON, New York, N. Y., assignor to Lidgerwood Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 3, 1914. Serial No. 810,106. (Cl. 192—9.)



1. In combination, a power shaft, a driven element loosely mounted on said power shaft, a connecting element carried by the power shaft and movable lengthwise thereof to be engaged with and disengaged from the said driven element on the power shaft, oppositely disposed cams on said movable connecting element, and a con-

troller having opposed operative faces adapted to be moved into engagement with said cams to move said connecting element into or out of engagement with said driven element.

2. In combination, a power shaft, a driven element loosely mounted on said power shaft, a connecting element carried by the power shaft and movable lengthwise thereof to be engaged with and disengaged from the said driven element on the power shaft, oppositely disposed cams on said movable connecting element, and a controller adapted to be moved in opposite directions into engagement with said cams to move said connecting element into or out of engagement with said driven element.

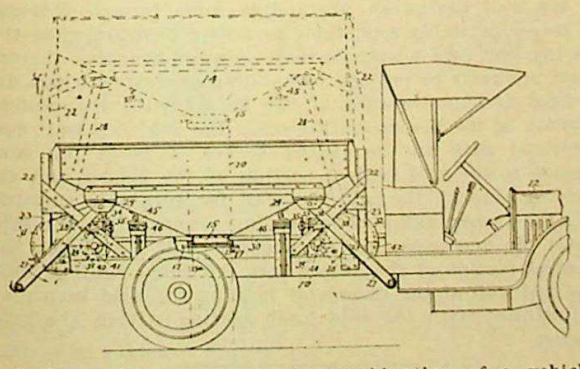
3. In combination, a power shaft, a driven element loosely mounted on said power shaft, a connecting element carried by the power shaft and movable lengthwise thereof to be engaged with and disengaged from the said driven element on the power shaft, oppositely disposed cams on said movable connecting element, and a rocking member having oppositely disposed projections located between said cams, said member being movable to place said projections in the path of one or the other of said cams to move said connecting element into or out of engagement with said driven element.

4. In combination, a power shaft, a driven element loosely mounted on said power shaft, a clutch sleeve carried by the power shaft and movable lengthwise thereof to be engaged with, and disengaged from, the said driven element on the power shaft, oppositely directed cam inclines on the end portions of said sleeve, a rocking member located between said cam inclines and having projections adapted to engage said inclines to move the clutch sleeve into and out of engagement with said driven element.

5. In combination, a power shaft, a driven element loosely mounted on said power shaft, a connecting element carried by the power shaft and movable lengthwise thereof to be engaged with and disengaged from the said driven element on the power shaft, oppositely disposed cams on said movable connecting element, a controller adapted to be moved in opposite directions into engagement with said cams to move said connecting element into or out of engagement with said driven element, a pedal member for moving said controller in one direction, and means for automatically moving said connecting element in the opposite direction when released from the pedal.

[Claims 6 to 8 not printed in the Gazette.]

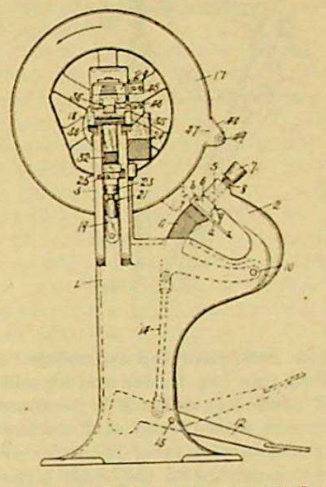
1,203,977. DELIVERY-TRUCK. GEORGE D. CARPENTER, Cleveland, Ohio, assignor, by mesne assignments, to The White Motor Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 21, 1914. Serial No. 878,244. (Cl. 21—86.)



1. In a delivery truck the combination of a vehicle frame, a body, two transversely extended shafts mounted on the vehicle frame, crank arms fixed to the ends of said shaft, and links pivotally connected with said crank arms and with said body, and means for simultaneously turning said shafts in opposite directions at the same rate, and four guides fixed to the chassis frame which engage parts fixed to said body.

2. In a delivery truck, the combination of a vehicle frame, a body, two transversely extended shafts mounted on the vehicle frame, crank arms fixed to the ends of said shaft, and links pivotally connected with said crank arms and with said body, a single power shaft, and two trains of gearing intermediate of said power shaft and the said two transverse shafts adapted to turn said transverse shafts in oposite directions.

1,203,978. HORSESHOE-CALKING MACHINE. ALBERT D. CARTWRIGHT and ALFRED BAER, Toledo, Ohio. Filed May 10, 1915. Serial No. 27,119. (Cl. 59—65.)



1. In a machine of the class described, a frame, a lever carried for rocking movements by said frame, means mounted for complete successive rotary movements and having a cam part for coacting with and imparting oscillatory movements to said lever, and a die block carried by said frame and operable in conjunction with said lever when rocked to act on a horse shoe calk to shape the same.

2. In a machine of the class described, a frame, a head adjustably carried by said frame, a lever fulcrumed in said head, means rotatably carried by the frame and operable to impart rocking movements to said lever, and a die carried by said head and operable in conjunction with said lever when rocked to act on a horse shoe calk to impart shaping movements thereto, said head being adjustable to compensate for wear between said lever and rotatable means.

3. In a machine of the class described, a frame, a lever carried for rocking movements by said frame, a rotatable wheel having a cam part for operating said lever, and a die block carried by said frame and operable in conjunction with said lever when rocked to shape a horse shoe calk.

4. In a machine of the class described, a frame, a lever carried for rocking movements by said frame, rotatable means for operating said lever, and a die block removably carried by said frame and usable in different positions with respect to said lever to coöperate therewith to perform different operations on horse-shoe calks.

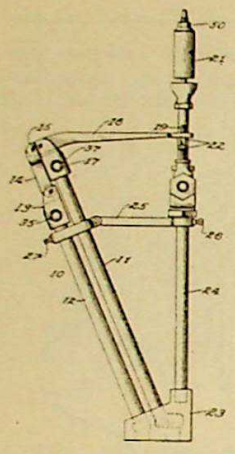
5. In a machine of the class described, a frame part having a forked arm with the inner sides of the fork arms grooved inward from the outer ends thereof, a die block having portions for sliding engagement with said grooves whereby the block can be removably carried by the arm, a lever carried by said frame part and having a jaw which is operable upon a rocking of the lever to coact with said die block in the performance of predetermined work, and rotatable means for imparting rocking movements to said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,203,979. BOILER-ALARM. CHARLES MOTLEY CLARK and ROGER W. ANDREWS, Chicago, Ill., assignors, by mesne assignments, to Erie Pump & Equipment Company, Erie, Pa., a Corporation of Pennsylvania. Filed Feb. 8, 1912. Serial No. 676,296. (Cl. 236—13.)

1. A boiler alarm comprising a contractible tube, a conductor connected to one end of said tube, said conductor being adapted to be connected to a boiler at its maximum

water level, and a bend in said conductor extending above said tube; one end of said tube being rigidly supported, and the other end of said tube being adapted to actuate a device when said tube contracts.



2. A boiler alarm comprising an expansible tube, a conductor connected by one end to one end of said tube, the other end of said conductor adapted to be connected to a boiler at its minimum water level, said conductor having a bend extending above said tube, the other end of said tube adapted to be connected to the boiler below its minimum water level, one end of said tube being rigidly supported, and the unsupported end of said tube adapted to operate a device when the tube expands.

3. A boiler alarm comprising a contractible tube and an expansible tube, a first conductor connected by one end with one end of said contractible tube; said conductor adapted to be connected with a boiler at its maximum water level and having a bend therein above said contractible tube, a second conductor having one end connected to one end of said expansible tube, the other end of said second conductor adapted to be connected with the boiler at its minimum water level and having a bend therein above said expansible tube, the other ends of each of said tubes being rigidly supported and being connected with a third conductor, said third conductor being connected with the boiler below its minimum water level, a water trap in said third conductor, and the free ends of said tubes adapted to operate a device when said contractible tube contracts or said expansible tube expands.

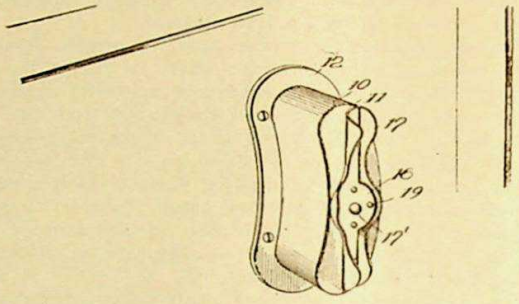
4. A boiler alarm comprising a contractible tube, an expansible tube, and a lever, one end of said contractible tube adapted to be connected with a boiler at its maximum water level, one end of said expansible tube adapted to be connected with the boiler at its minimum water level, one end of each of said tubes being rigidly supported, said tubes being composed of material of different coefficients of thermal expansion, the free ends of said tubes being pivotally connected adjacent to each other near one end of said lever, the other end of said lever being adapted to be operatively connected to an alarm device.

5. A boiler alarm comprising metal tubes of unequal lengths, and a lever, said tubes being adapted to be connected with a boiler respectively at its maximum and its minimum water level, the other ends of said tubes being adapted to be connected to said boiler below its minimum water level, one end of each of said tubes being rigidly supported, the other ends of said tubes being pivotally connected adjacent to each other to one end of said lever, and the other end of said lever being adapted to be operatively connected to an alarm device.

[Claims 6 to 14 not printed in the Gazette.]

1,203,980. SAW-HOLDER. MATTHEW CLARKE, Wilkes-Barre, Pa. Filed May 20, 1916. Serial No. 98,844. (Cl. 24—221.)

1. A saw holder including a casing formed to extend through the opening of a saw handle, a keeper rotatably adjustable to active position upon the casing, means associated with the keeper for normally holding the keeper at adjustment and arranged within the casing, a base plate closing the casing with the said plate providing an attaching member for the holder, and lugs formed on the bottom edges of the casing and extending through the base plate with the outer extremities of said lugs rebent to engage therewith for detachably connecting the said plate with the casing whereby access may be had to the said means.



2. A saw holder including a casing formed to extend through the opening of a saw handle, a keeper rotatably adjustable to active position upon the casing, means associated with the keeper for normally holding the keeper at adjustment and arranged within the casing, a base plate closing the casing and provided with upstanding sockets, and lugs carried by the casing and engaging in said sockets with the said lugs arranged flush with the outer face of the said plate for detachably connecting the plate with the casing whereby access may be had to the said means.

3. A device of the character described including a casing provided with a top wall, a keeper rotatably adjustable to active position upon the casing, a pivot pin supporting the keeper and extending through the said wall, and a bowed spring carried by the inner extremity of said pivot pin and engaging the casing to normally urge the keeper into frictional engagement with said top wall for holding the said keeper at adjustment.

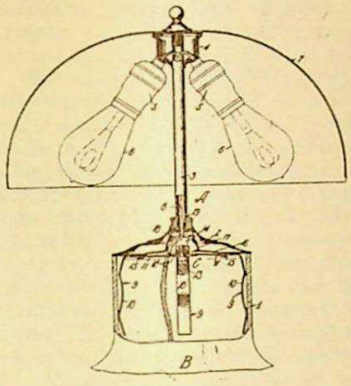
4. A device of the character described including a casing provided with a top wall, a keeper rotatably adjustable to active position upon the said casing and provided with a socket, a knob upstanding from the said top wall of the casing, a pivot pin for the keeper, and yieldable means upon said pin to normally urge the keeper into frictional engagement with said top wall with the said knob engaging within the said socket for holding the keeper at adjustment.

5. A saw holder including a casing formed to extend through the opening of a saw handle and provided with a top wall having an upstanding knob formed thereon, a keeper rotatably adjustable to active position upon the casing, the said keeper having opposite margins thereof bent upwardly to provide upstanding operating wings arranged at opposite ends of the keeper with the central portion of the keeper seating upon the said top wall and provided with an upstanding socket, a pivot pin connected to the said central portion of the keeper and extending through the said top wall for rotatably supporting the keeper, and a bowed spring connected to the said pivot pin and engaging the said top wall for urging the central portion of the keeper into frictional contact with the top wall of the casing for holding the said keeper at adjustment with the said knob seating within the said socket.

1,203,981. TABLE-LAMP ATTACHMENT. JAMES S. CLIFFORD, Weehawken, N. J. Filed Feb. 9, 1916. Serial No. 77,160. (Cl. 240—81.)

1. The combination of a lamp base, a stem fastened thereto, a hickey having threaded connection with the stem, a bracket disposed under the base and clamped between the latter and hickey, attaching members adjustably mounted on the bracket, and a fastener clamping the members to the hickey in different positions of adjustment.

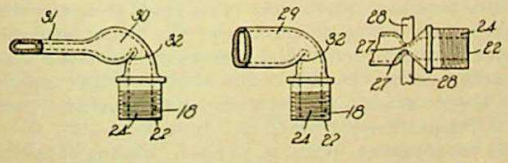
2. The combination of a lamp base, a hickey, a bracket having a hollow boss in which the hickey is disposed, the boss being provided with an internal flange clamped between the hickey and base, L-shaped attaching members guided on the bracket, and a fastener common to all the members and clamping the same to the hickey.



3. The combination of a lamp base, a hickey, a bracket having a hollow boss in which the hickey is disposed, the boss being provided with an internal flange clamped between the hickey and base, L-shaped attaching members guided on the bracket, said members having overlapping slotted portions with their slots intersecting, and a fastener passing through the slots and connected with the hickey for clamping the members in different positions of adjustment.

4. The combination of a table lamp base, an annular bracket disposed in the base and having at its periphery radially disposed guides, a hickey for clamping the bracket to the base, L-shaped attaching members having horizontal slotted portions movable in the guides, the slots of the members intersecting at a point under the said hickey, and a screw extending through the slots in the members and screwing into the said hickey for clamping the members in different positions of adjustment.

1,203,982. METHOD OF FORMING SPRINGS FOR PRESSURE OR THE LIKE GAGES. AUSTIN B. COLLETTE, Everett, Mass., assignor to American Steam Gauge & Valve Manufacturing Co., a Corporation of Massachusetts. Original application filed May 19, 1915, Serial No. 29,203. Divided and this application filed Jan. 28, 1916. Serial No. 74,868. (Cl. 29—148.)



1. The herein described method of forming a gage spring tube which consists in boring a hole in a metal bar longitudinally thereof for a predetermined portion of its length leaving at least one end of said bar open, then in bending the open end of said bar at an abrupt angle to the body of said bar, then in flattening said bar from said bend for a portion of the length thereof, and finally curving said flattened portion.

2. The herein described method of forming a gage spring which consists in boring a hole in a metal bar longitudinally thereof for a predetermined portion of its length, then in removing a portion of the metal from the exterior of said bar intermediate of the ends to form a comparatively thin walled tube terminating at one end in an end portion of greater thickness than said thin tubular portion, then in flattening said thin walled portion for a predetermined portion of its length, and finally in bending said flattened portion.

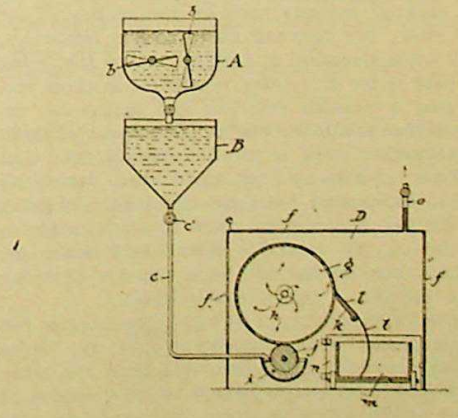
3. The herein described method of forming a gage spring which consists in boring a hole in a metal bar longitudinally thereof for a predetermined portion of its length, then removing a portion of the metal from the exterior of said bar intermediate of the ends to form a comparatively thin walled tube terminating at one end in an end portion of greater thickness than said thin tubular portion, then bending said tube adjacent to said thickened end portion to bring the same at an abrupt angle to said tube, then flattening a predetermined portion of said thin tubular portion, and finally bending it substantially in the form of a semi-circle.

4. The herein described method of forming a gage spring which consists in boring a hole in a metal bar longitudinally thereof, then in removing a portion of the metal from the exterior of said bar intermediate of the ends to form a comparatively thin walled tube terminating in an end portion one end thereof of larger diameter than said thin tubular portion, then in indenting said thin tubular portion upon opposite sides thereof at points adjacent to the thickened end of said tube, then in bending said tube at said indented portion to bring said thickened portion at an abrupt angle to said tube, then in flattening said tubular portion for a predetermined portion of its length, and finally in bending said flattened portion.

5. The herein described method of forming a gage spring tube which consists in boring a hole in a metal bar longitudinally thereof for a predetermined portion of its length, then in removing a portion of the metal from the exterior of said bar intermediate the ends to form a comparatively thin tube terminating at one end in a portion of greater thickness than said thin tubular portion, then in indenting said thin walled portion at a point adjacent to the thickened end thereof, then in bending said tube at said indented portion to bring said thickened portion of said tube substantially at right angles to the thin walled portion of said tube, then in flattening said thin walled portion for a predetermined distance the major diameter of said flattened portion being substantially parallel with the axis of said end portion, then in bending said tube to form a spring.

[Claim 6 not printed in the Gazette.]

1,203,983. POWDERED-EGG PRODUCT AND PROCESS OF MAKING THE SAME. GEORGE C. CONTANT, New York, N. Y., assignor of one-half to Josiah Decker, Jr., Montclair, N. J. Filed Jan. 22, 1916. Serial No. 73,587. (Cl. 99—5.)



1. The process of producing a desiccated egg product which consists in separating the yolks from the whites, agitating one of the thus separated parts, without whipping the same, until it is uniform consistency, adding a preservative thereto, and then desiccating the mixture at a temperature below 212 degrees Fahrenheit.

2. The process of producing a desiccated egg product which consists in separating the yolks from the whites, agitating one of the thus separated parts, without whipping the same, until it is of uniform consistency, adding a preservative thereto, desiccating the mixture at a tem-

perature below 212 degrees Fahrenheit, and then reducing it to a powder.

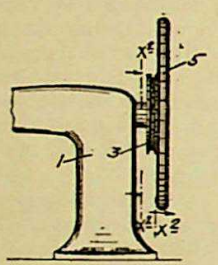
3. The process of producing a desiccated egg product which consists in separating the yolks from the whites, agitating one of the thus separated parts, without whipping the same, until it is free from all stringiness, adding sugar thereto, and then desiccating the mixture at a temperature below 212 degrees Fahrenheit.

4. The process of producing a desiccated egg product which consists in separating the yolks from the whites, agitating one of the thus separated parts, without whipping the same, until it is free from all stringiness, adding sugar thereto, desiccating the mixture at a temperature below 212 degrees Fahrenheit, and then reducing it to a powder.

5. The process of producing a desiccated egg product which consists in separating the yolks from the whites, agitating the whites, without whipping the same, until they are free from all stringiness, adding sugar thereto, and then desiccating the mixture at a temperature below 212 degrees Fahrenheit.

[Claims 6 to 16 not printed in the Gazette.]

1,203,984. FAN ATTACHMENT FOR SEWING-MACHINES. LYLE D. COREY, Minneapolis, Minn. Filed June 3, 1915. Serial No. 31,857. (Cl. 230—9.)



1. The combination with a rotatable wheel, of a fan comprising inner and outer concentric rims, fan-blades located entirely inward of the outer rim and affording braces connecting the rims, said outer rim having a smooth exterior and means for detachably connecting the inner rim to the rotatable wheel.

2. The combination with a rotatable wheel, of a fan comprising inner and outer concentric rims, fan-blades affording oblique braces connecting the rims, said fan-blades being located entirely between the planes of the edges of the rims, the forward edges of the fan-blades, with respect to the direction of rotation of the fan, being made blunt, said outer rim being segmental in cross section and having a smooth exterior, and means for detachably connecting the inner rim to the rotatable wheel.

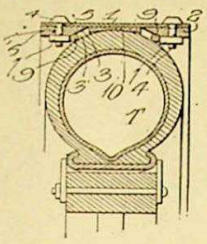
3. The combination with a rotatable wheel, of a fan comprising inner and outer concentric rims, fan-blades affording braces connecting the rims, said inner rim being transversely divided and channel-shape in cross section to receive the rim of the rotatable wheel, and means for circumferentially contracting the inner rim for clamping the same onto the rim of the rotatable wheel.

4. The combination with a rotatable wheel, of a fan comprising inner and outer concentric rims, fan-blades affording braces connecting the rims, said inner rim being transversely divided and channel-shape in cross section to receive the rim of the rotatable wheel, said inner rim also having a flexible joint, and means for circumferentially contracting the inner rim for clamping the same onto the rim of the rotatable wheel.

5. The combination with a rotatable wheel, of a fan comprising transversely divided inner and outer concentric rims, fan-blades affording braces connecting the rims, said inner rim being channel-shape in cross section to receive the rim of the rotatable wheel, and means for contracting the inner rim for clamping the same onto the rim of the rotatable wheel.

[Claims 6 to 14 not printed in the Gazette.]

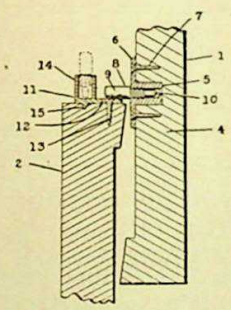
1,203,985. TIRE-ARMOR. SAMUEL THADDEUS CULP, Littleton, Colo. Filed Jan. 24, 1916. Serial No. 73,957. (Cl. 152—33.)



1. The combination with a vehicle wheel; of an annular band surrounding said wheel, a plurality of stops extending inwardly at intervals from said band, and a pair of quickly adjustable split retaining rings, one of said rings being disposed on each side of the tire of the wheel and contacting with said stops.

2. The combination with a vehicle wheel; of an annular band surrounding said wheel, a pair of reinforcing members secured to the inner side of said band at its edges, the inner sides of said members being flat and having their adjacent edge portions beveled from said flat sides toward the center of said band to form a seat to receive the tire of said wheel, a plurality of bolts extending through said band and the members, nuts on the inner ends of said bolts engaging the flat faces of said members, and a pair of rings, one engaging each side of the tire of said wheel, said rings contacting with the beveled portions of said members and said nuts.

1,203,986. WINDOW-LOCK. JOSEPH S. CURNOW, Newark, N. J. Filed Jan. 20, 1916. Serial No. 73,086. (Cl. 16—143.)



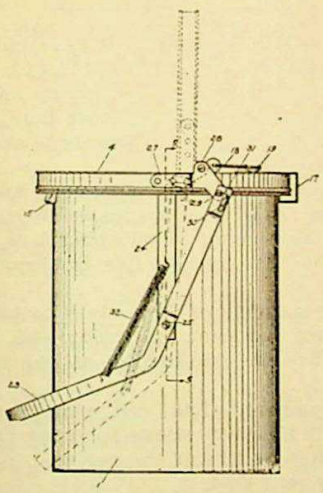
1. In combination with a window having upper and lower sashes, a socket adapted to be secured to the upper sash said socket having interior screw threads, a stud threaded to removably screw into said socket with an end projecting to overlie the top of the lower sash in the path of movement thereof and thereby prevent the window from being opened further, and a pocket fast upon the top of the lower sash for receiving said stud and protecting the threads thereon when not in use.

2. In combination with a window having upper and lower sashes, a socket adapted to be secured to the upper sash said socket having interior screw threads, a stud threaded to removably screw into said socket with an end projecting to overlie the top of the lower sash in the path of movement thereof and thereby prevent the window from being opened further, and a pocket fast upon the top of the lower sash for receiving said stud and protecting the threads thereon when not in use said pocket having a foot upon the top of said lower sash in the path of movement of said stud when screwed in its socket.

1,203,987. RECEPTACLE-COVER. LINFORD J. DAVIS, Battle Creek, Mich., assignor to Keyes-Davis Company, Inc., Battle Creek, Mich. Filed Dec. 13, 1915. Serial No. 66,541. (Cl. 220—115.)

1. In a structure of the class described, the combination with a receptacle, of a cover having a down-turned peripheral flange of a diameter substantially greater than that

of the receptacle, said cover having an opening therein and flanges at the edges of the opening projecting downwardly within the receptacle, a U-shaped cover retaining member secured by one arm to said peripheral cover flange, the other arm being adapted to engage the rim of the receptacle, a cover clamp disposed oppositely to said member and comprising a hook adapted to embrace the cover flange and engage the rim of the receptacle, and a lever to which said hook is pivotally connected, said lever being pivotally mounted on said cover so that the hook pivot swings below the plane of the lever pivot when the lever is actuated to engage the hook, a closure for said cover opening having a downturned flange at its edge embracing said cover flange, and a downwardly projecting flange at its rear edge, a hinge for said closure provided with a pintle projecting at the sides of the cover, arms pivoted on the ends of said pintle and secured to the flange of said closure, hangers mounted on said cover to depend at the sides of said receptacle, a bail-shaped lever pivotally mounted on said hangers and having longitudinal slots therein with transverse portions extending forwardly at their upper ends, pins on said arms engaging said slots, a spring connected to said lever and to one of said hanger members and normally holding said lever with the pins in the transverse portions of said slots, and a coiled spring arranged over said flange at the rear edge of said closure and secured at one end to the under side of said cover and at its other end to the under side of said closure.



2. In a structure of the class described, the combination with a receptacle, of a cover having a down-turned peripheral flange of a diameter substantially greater than that of the receptacle, said cover having an opening therein, a U-shaped cover retaining member secured by one arm to said peripheral cover flange, the other arm being adapted to engage the rim of the receptacle, a cover clamp disposed oppositely to said member and comprising a hook adapted to embrace the cover flange and engage the rim of the receptacle, and a lever to which said hook is pivotally connected, said lever being pivotally mounted on said cover so that the hook pivot swings below the plane of the lever pivot when the lever is actuated to engage the hook, a closure for said cover opening having a downturned flange at its edge embracing said cover flange, a hinge for said closure provided with a pintle projecting at the sides of the cover, arms pivoted on the ends of said pintle and secured to the flange of said closure, hangers mounted on said cover to depend at the sides of said receptacle, a bail-shaped lever pivotally mounted on said hangers and having longitudinal slots therein with transverse portions extending forwardly at their upper ends, pins on said arms engaging said slots, a spring connected to said lever and to one of said hanger members and normally holding said lever with the pins in the transverse portions of said slots.

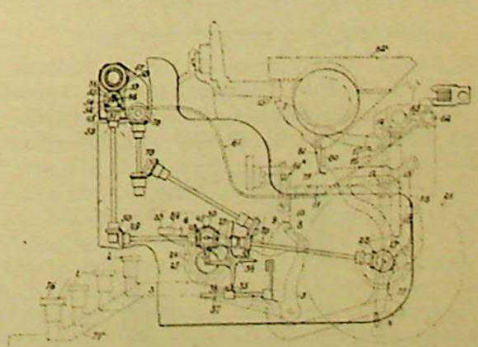
3. In a structure of the class described, the combination with a receptacle, of a cover having a downturned peripheral flange of a diameter substantially greater than that of the receptacle, said cover having an opening therein and flanges at the edges of the opening projecting downwardly within the receptacle, a U-shaped cover retaining member secured by one arm to said peripheral cover flange, the other arm being adapted to engage the rim of the receptacle, a cover clamp disposed oppositely to said member and comprising a hook adapted to embrace the cover flange and engage the rim of the receptacle, and a lever to which said hook is pivotally connected, said lever being pivotally mounted on said cover so that the hook pivot swings below the plane of the lever pivot when the lever is actuated to engage the hook, a closure for said cover opening having a downturned flange at its edge embracing said cover flange, and a downwardly projecting flange at its rear edge, a hinge for said closure, and a coiled spring arranged over said flange at the rear edge of said closure and secured at one end to the under side of said cover and at its other end to the under side of said closure.

4. In a structure of the class described, the combination with a receptacle, of a cover having a downturned peripheral flange of a diameter substantially greater than that of the receptacle, said cover having an opening therein, a U-shaped cover retaining member secured by one arm to said cover flange, the other arm being adapted to engage the rim of the receptacle, a cover clamp disposed oppositely to said member and comprising a hook adapted to embrace the cover flange and engage the rim of the receptacle, and a lever to which said hook is pivotally connected, said lever being pivotally mounted on said cover so that the hook pivot swings below the plane of the lever pivot when the lever is actuated to engage the hook, a closure for said cover opening having a downturned flange at its edge embracing said cover flange, and a hinge for said closure.

5. In a structure of the class described, the combination with a receptacle, of a cover having a downturned peripheral flange of a diameter substantially greater than that of the receptacle, said cover having an opening therein, U-shaped cover retaining members secured by one arm to said cover flange, the other arms of said members being adapted to engage the rim of the receptacle, a cover clamp disposed oppositely to said retaining members and comprising a hook adapted to embrace the cover flange and engage the rim of the receptacle, and a lever to which said hook its pivotally connected, said lever being pivotally mounted on said cover so that the hook pivot swings below the plane of the lever pivot when the lever is actuated to engage the hook, a closure for said cover opening, a hinge for said closure, a pair of hangers mounted on said cover to depend at the sides of said receptacle, a lever pivotally mounted on said hangers and having operating connections with said closure, and a closing spring for said closure.

[Claims 6 to 17 not printed in the Gazette.]

1,203,988. COMBINED TYPE-WRITING AND COMPUTING MACHINE. GUSTAVE O. DEGENER and ELIAS SAUNDERS, New York, N. Y., assignors to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Dec. 23, 1911. Serial No. 667,464. (Cl. 235—59.)



1. In a computing machine, the combination with a single set of digit keys, of computing wheels, a common drive engaging said computing wheels to carry into each

a single digit as recorded by said keys, another computing wheel arranged to receive two digits from said common drive, and means controlling said common drive exclusively from said digit.

2. A key for a typewriting and computing machine bearing the numerals "4" and "0," and connections whereby said key selectively prints either, but always computes the same.

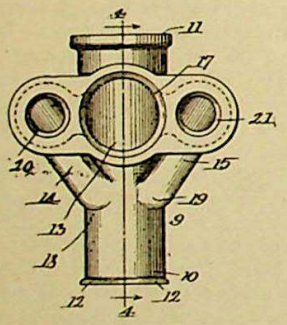
3. A key for a typewriting and computing machine bearing the numerals "5" and "1," and connections whereby said key selectively prints either, but always computes the same.

4. A key for a typewriting and computing machine bearing the numerals "6" and "1," and connections whereby said key selectively prints either, but always computes the same.

5. The combination with a computing mechanism, of a typewriting mechanism having solely a set of nine digit or numeral keys, including both a numeral key arranged to cause an actuation of said computing mechanism according to a predetermined amount, and a second numeral key arranged to cause the actuation of said computing mechanism according to a predetermined amount, and means to enable said numeral keys when actuated in succession to print a two-figured number, the individual digits of which differ from the predetermined amount which the corresponding keys cause said computing mechanism to compute and whose digits taken together represent an amount bearing a definite relation to the aggregate computing effect caused by both said numeral keys.

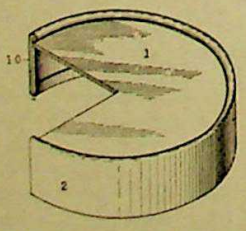
[Claims 6 to 25 not printed in the Gazette.]

1,203,989. PIPE-FITTING. GEORGE J. DEHN, Chicago, Ill. Filed Dec. 19, 1913. Serial No. 807,648. (Cl. 137—75.)



A one-piece T-fitting for a drainage system, comprising a stack pipe, a large inlet pipe adapted for connection to a closet and leading into the stack and a plurality of smaller inlet pipes adapted for connection to a sink and bath-tub, the inlet terminals of all of said inlet pipes having their axes in the same horizontal plane and having intersecting portions forming common division walls between them and extended in the same direction for connection to parallel drain pipes disposed laterally of one another, to permit them to be disposed between two ordinarily spaced joists without cutting away the joists.

1,203,990. BOX. ALEXANDER H. DREUX, Buffalo, N. Y., assignor to F. N. Burt Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario, Canada. Filed Mar. 31, 1916. Serial No. 87,934. (Cl. 229—6.)



1. A box comprising a body portion composed of a strip folded both longitudinally and transversely, the plies of said strip measured transversely being of unequal length and lying opposite each other, and a head having a face lying against the shoulder provided by the shorter ply, the end of the longer ply opposite the longitudinal folding line of said strip being folded to provide a shoulder lying against the other face of said head.

2. A box comprising a head and a flange, said flange comprising a strip folded on longtiudinal lines to respectively underlie and overlie said head, and thereby support and retain said head in place.

3. A box comprising a head and a flange, said flange comprising a strip slit on a longitudinal line and folded on said line to provide a ply the free longitudinal edge of which lies opposite one face of said head, the free edge of the other ply being folded to lie opposite the other face of said head.

4. A box comprising a head and a flange, said flange comprising a strip slit on a longitudinal line and folded on said line to provide a ply, the free longitudinal edge of which lies opposite one face of said head, the free edge of the other ply being folded to lie opposite the other face of said head, said plies being adhesively secured together.

5. A body for a box comprising a strip folded both longitudinally and transversely, the plies of said strip lying opposite each other, one ply providing a longitudinally disposed shoulder disposed transversely opposite and spaced from the free end of the other ply.

[Claims 6 and 7 not printed in the Gazete.]

1,203,991. ALLOY. JOHN T. DWYER, St. Louis, Mo. Filed July 26, 1916. Serial No. 111,417. (Cl. 75—1.)

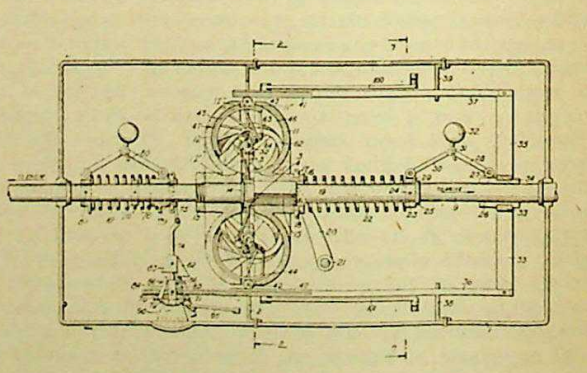
1. An alloy comprising lead, antimony and phosphorus, in which the amount of lead is greater than the amount of antimony, and the amount of antimony is greater than the amount of phosphorus.

2. An alloy comprising lead, antimony and phosphorus, in which the amount of lead is greater than the amount of antimony, and the amount of phosphorus is from one one-thousandth of one per cent. to five one-hundredths of one per cent.

3. An alloy consisting of from sixty to ninety per cent. lead, ten to forty per cent. antimony and from one one-thousandth to five one-hundredths of one per cent. phosphorus.

4. An alloy composed of the following ingredients mixed in approximately the proportions specified twelve per cent. antimony, two hundredths of one per cent. phosphorus and eighty-eight per cent lead.

1,203,992. TRANSMISSION MECHANISM. PHILIP WILLIAMS ENNIS, Factoryville, Pa. Filed Jan. 20, 1916. Serial No. 73,157. (Cl. 74—97.)



1. In a friction drive mechanism of the character described, a pair of friction plates, a driving member for moving one of said plates, a driven member connected to the other of said plates, a wheel arranged between said plates and contacting with both of the plates, means for shifting the position of said wheel so as to vary the ratio of drive, and a controlling member connected with said means for moving said means according to the resistance applied to the driven member, whereby the driven member

may operate at different speeds while the driving means will operate continually at the same speed.

2. In a friction drive mechanism of the character described, a pair of friction plates, both of said plates being provided with a concave contacting face, said contacting faces facing each other, a friction wheel arranged between said plates and in engagement with both of said faces, said friction wheel being adapted to be rotated on its axis so as to vary the transmission from one plate to the other, automatic means for shifting the position of said friction wheel, a driven member connected with one of said plates and with the automatic means, and a driving member connected with the other of said plates.

3. In a friction drive mechanism of the character described, a pair of friction plates, each of said plates having a convex annular friction surface, said friction surfaces facing each other, a friction wheel arranged between said surfaces and engaging both surfaces, said friction wheel being adapted to be adjusted so as to contact with the hub portion of the surface of one of the plates and the peripheral portion of the other of said plates, means for adjusting the friction wheel so as to move the same from contact with the peripheral surface of the last mentioned plate to any point between said peripheral point and the hub so as to change the ratio of speed, a driven member connected with one of said plates, a driving member connected with the other of said plates, and means connected with the driven member for automatically shifting said friction wheel.

4. In a friction drive mechanism of the character described, a driving member, a friction plate connected with said driving member, said friction plate having a convex annular surface, a driven member, a friction plate connected with said driven member provided with a convex annular surface, a friction wheel arranged between said plates and engaging both of said surfaces, means connected with said wheel for adjusting the same so that the wheel may engage said surfaces at any point from the hub section to the peripheral section and thereby vary the ratio of drive, an automatic member connected with said means and with the driven member for shifting the wheel according to the ratio of the driven member, and a manually operated member connected with said means whereby the wheel may be shifted manually.

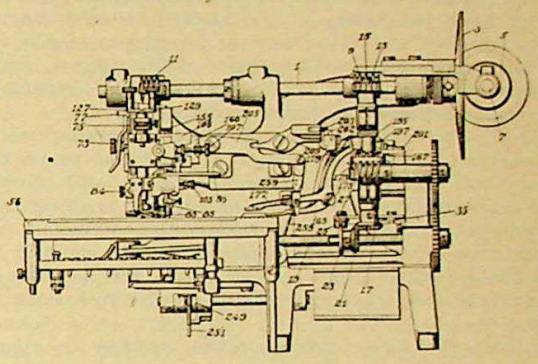
5. In a friction drive mechanism of the character described, a driving member, a friction plate connected with said driving member, said friction plate having a concave annular surface, a driven member, a friction plate connected with said driven member so as to rotate therewith but capable of movement toward and from the first mentioned friction plate, said last mentioned friction plate having a concave annular friction surface, a friction wheel arranged between said plates and adapted to engage said surface, means for shifting the position of said friction wheel so as to vary the speed of transmission between the plates, and a resilient member engaging the slidably mounted plate for pressing the same against said friction wheel.

[Claims 6 to 10 not printed in the Gazette.]

1,203,993. EDGE-FINISHING MACHINE. HERBERT ELLIOT ENSLIN, Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 6, 1915. Serial No. 44,110. (Cl. 69—1.)

1. A machine of the class described, having, in combination, a support for the work, a shrinking tool for operating upon the margin of the work, a turning post for holding said margin against said tool, feeding means for advancing the work, guiding means coöperating with said feeding means to crowd the edge of the work against said post, a spring for forcing said guiding means against one surface of the work, and means for varying the tension of said spring.

2. A machine of the class described, having, in combination, a support for the work, a shrinking tool for operating upon the margin of the work, a turning post for holding said margin against said tool, feeding means including a turn table substantially flush with said work support, and a feed wheel the plane of the path of rotation of which is at an angle to said support, a molding member the axis of which is located at one side of the axis of said turn table, and a foot of small area arranged to exert a drag on the work at a point at one side of said turning post.



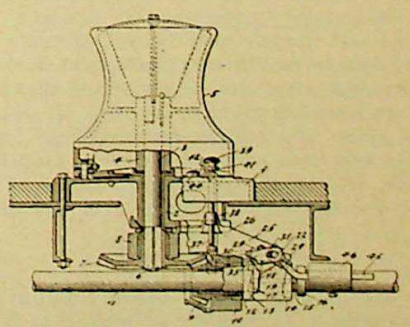
3. A machine of the class described, having, in combination, means engaging both sides of the work to feed it, an edge gage, and a stationary member arranged to contact with one side of the work and thereby exert a drag upon it at a point spaced from said gage.

4. A machine of the class described, having, in combination, means engaging both sides of the work to feed it, an edge gage, and a stationary member arranged to contact with one side of the work and thereby exert a drag upon it at a point spaced from said gage, said member being adjustable.

5. A machine of the class described, having, in combination, means engaging both sides of the work to feed it, an edge gage, and a stationary member arranged to contact with one side of the work and thereby exert a drag upon it at a point spaced from said gage, said member being adjustable in the direction of the feed movement.

[Claims 6 to 40 not printed in the Gazette.]

1,203,994. CLUTCH-OPERATING MEANS. CYRUS EVERS and FRITIOF CARLSSON, New York, N. Y., assignors to Lidgerwood Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Dec. 30, 1914. Serial No. 879,627. (Cl. 192—9.)



1. In combination, a shaft, clutch members one of which is mounted on said shaft for movement toward and away from the other, a cam incline on said movable clutch-member, a rocking member adapted to engage said incline to move the said movable clutch-member, and means for cushioning said rocking member.

2. In combination, a shaft, clutch members one of which is mounted on said shaft for movement toward and away from the other, a cam incline on said movable clutch-member, a rocking member adapted to engage said incline to move the said movable clutch-member, and a cushioned support for said rocking member.

3. In combination, a shaft, clutch members one of which is mounted on said shaft for movement toward and

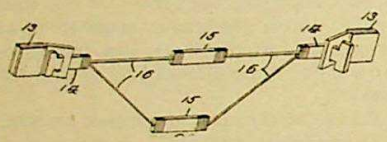
away from the other, a cam incline on said movable clutch-member, a rocking member adapted to engage said incline to move the said movable clutch-member, a rock shaft upon which said rocking member is movably mounted, and cushioning means between said rock shaft and rocking member.

4. In combination, a shaft, clutch members one of which is mounted on said shaft for movement toward and away from the other, a cam incline on said movable clutch-member, a rocking member adapted to engage said incline to move the said movable clutch-member, and a rock shaft upon which said rocking member is mounted for movement relative thereto under strain.

5. In combination, a shaft, clutch members one of which is mounted on said shaft for movement toward and away from the other, a cam incline on said movable clutch-member, a rocking member adapted to engage said incline to move the said movable clutch-member, a rock shaft upon which said rocking member is mounted for movement relative thereto under strain, and a spring between said rock shaft and rocking member to cushion the latter.

[Claims 6 to 12 not printed in the Gazette.]

1,203,995. ALARM. FRANK M. FARGO, Chicago, Ill., and GEORGE L. THOM, Brooklyn, N. Y.; said Thom assignor to said Fargo. Filed June 18, 1915. Serial No. 34,939. (Cl. 116—42.)



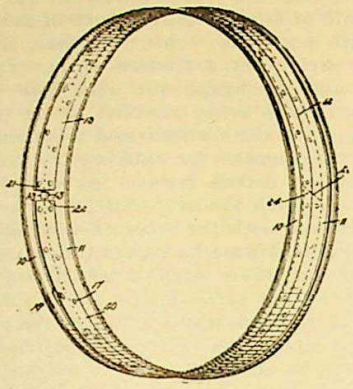
1. In an alarm of the class described, fastening means for attachment to the relatively moving parts of a closure, a removable alarm detachably connected to said fastening means, said alarm comprising a plurality of units of different lengths to explode successively when continued tension is exerted by the fastening means of said alarm.

2. In an alarm of the class described, fastening tags for attachment to the relatively moving parts of a closure, said tabs having the opposite faces thereof gummed, said tabs extending beyond the gummed portions thereof, each of said extensions having an opening therein, detonating alarms detachably carried by said tabs, said alarms having heads for engagement in the openings formed in said extensions and said alarms comprising a plurality of independent sections carried by said heads, said sections being of different lengths to successively sound the alarms as the heads are moved farther apart.

3. In an alarm of the class described, tags for attachment to the separable parts of a closure, alarms carried by said tabs, said alarms comprising sections of different lengths to be successively broken as said tabs are moved apart.

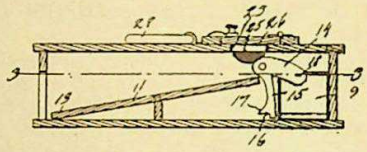
1,203,996. SECTIONAL RIM. GEORGE THOMAS FIELDING, New York, N. Y., assignor or one-half to William T. Hornaday, New York, N. Y. Filed Apr. 17, 1916. Serial No. 91,618. (Cl. 152—21.)

The combination of a two-part rim separated circumferentially, the inner edges of the two rim parts being constructed to form a smooth joint, lugs on the inner face of the rim and located on the rim parts at opposite sides of their joint, the inner peripheral edges of the rim parts having cut-out registering portions for the passage of the tire valve, and a locking ring made in sections separated transversely at approximately diametrically opposite points and fitting onto the inner face of the rim, the locking ring covering the joint and having sets of apertures engaging the said lugs, the adjacent ends of the ring section being spaced apart at the said cut-out portions of the rim parts for the passage of the tire valve and the other adjacent ends thereof being beveled in meeting relation, the engaging lugs and apertures adjacent the ends of the ring



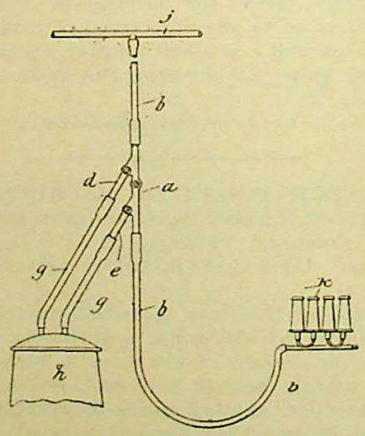
sections being transversely alined, and the remaining lugs and apertures being in staggered relation.

1,203,997. ANIMAL-TRAP. JOHN B. FIORETTA, New York, N. Y. Filed June 2, 1916. Serial No. 101,406. (Cl. 43—26.)



An animal trap comprising in combination, a pound inclosure, passageways giving access to said inclosure, a plurality of treadways pivoted in said passageways to rock longitudinally therein, said treadways having their forward ends weighted to assume normally depressed positions, means for locking the first treadway in the opposite position when an animal has passed thereover, said locking means consisting of a latch element adapted to engage over the first treadway and an angular weighted arm extended into the pathway of the second treadway to be lifted to free the first treadway, and bait holding means above the normally elevated end of each treadway.

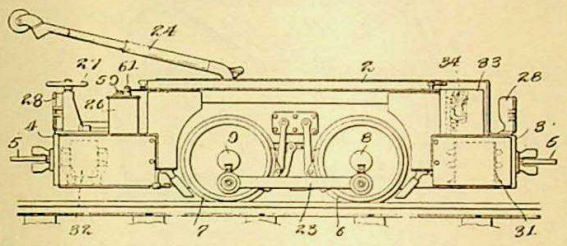
1,203,998. RELEASER INSTALLATION OF MILKING-MACHINES. THOMAS NOTON FLETCHER, Hamilton, New Zealand. Filed July 10, 1915. Serial No. 39,084. (Cl. 31—73.)



1. In milking machine installations, the combination with the teat cup branch from the milk vacuum main, of a device consisting of a main tube interposed in such branch and having a valve controlling the passage through it, and two tubular branches leading from such main tube on respectively opposite sides of the valve and each provided with a control valve, substantially as specified.

2. In milking machine installations, the combination with the teat cup branch from the milk vacuum main of a device interposed therein consisting of a main tube extending longitudinally with such branch and having a valve controlling the passage therethrough, and provided with two tubular branches leading from respectively opposite sides of the control valve and each provided with a control valve, and a receiver with which such branches are connected, substantially as specified.

1,203,999. ELECTRIC LOCOMOTIVE. JOHN H. FLORY, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Dec. 27, 1913. Serial No. 809,087. (Cl. 105—267.)



1. In an electric locomotive, the combination with the main frame and the driving wheels, of a trolley mechanism, a storage battery, a motor connected with the wheels and adapted to utilize high voltage current from the trolley mechanism, a second motor connected with the wheels and adapted to utilize low voltage current from the battery, and a controller comprising a set of contacts adapted to introduce starting resistance and four sets of distributing contacts movable independently of the resistance contacts and adapted respectively to connect the trolley mechanism and the resistance contacts in circuit with the high voltage motor to turn it in either direction and to connect the battery and the resistance contacts in circuit with the low voltage motor to turn it in either direction.

2. In an electric locomotive, the combination with the main frame and the driving wheels, of a trolley mechanism, a storage battery, a motive mechanism connected with the wheels and comprising a single set of field poles and a single rotor having two commutators and two sets of armature windings connected respectively thereto, one winding being adapted to utilize high voltage current from the trolley mechanism and the other being adapted to utilize low voltage current from the battery, and a controller comprising a set of contacts adapted to introduce starting resistance and four sets of distributing contacts movable independently of the resistance contacts and adapted respectively to connect the trolley mechanism and the resistance contacts in circuit with the high voltage winding to turn it in either direction and to connect the battery and the resistance contacts in circuit with the low winding motor to turn it in either direction.

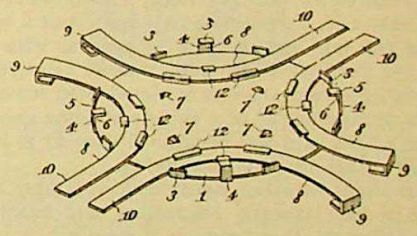
3. In an electric locomotive, the combination with the main frame and the driving wheels, of a trolley mechanism, a storage battery, a motor connected with the wheels and adapted to utilize high voltage current from the trolley mechanism, a second motor connected with the wheels and adapted to utilize low voltage current from the battery, and electrical connections including a controlling switch having four positions adapted as follows: (1st) to connect the first motor with the trolley mechanism to cause rotation in one direction, (2nd) to connect the first motor with the trolley mechanism to cause rotation in the other direction, (3rd) to connect the second motor with the battery to cause rotation in the first said direction, and (4th) to connect the second motor with the battery to cause rotation in the second said direction.

4. In an electric locomotive, the combination with the main frame and the driving wheels, of a trolley mechanism, a storage battery, a motor connected with the wheels and adapted to utilize high voltage current from the trolley mechanism, a second motor connected with the wheels adapted to utilize low voltage current from the battery, and means for changing the electrical connections between the battery and the second motor whereby the latter may be used as a generator to charge the battery, and a controller comprising contacts adapted to introduce starting resistance into the circuit of the first motor and other contacts adapted to complete the battery charging circuit only when the starting resistance is cut out of the motor circuit.

5. In an electric locomotive, the combination with the main frame and the driving wheels, of a trolley mechanism, a storage battery, a motive mechanism connected with the wheels and comprising a single set of field poles and a single rotor having two commutators and two sets of armature windings connected respectively thereto, one winding being adapted to utilize high voltage current from the trolley mechanism and the other being adapted to utilize low voltage current from the battery, means for changing the electrical connections between the battery and the second set of winding and the second commutator whereby they may be used to generate current to charge the battery, and a controller comprising contacts adapted to introduce starting resistance into the circuit of the first motor and other contacts adapted to complete the battery charging circuit only when the starting resistance is cut out of the motor circuit.

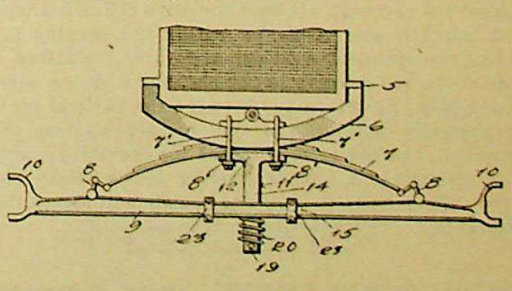
[Claims 6 to 12 not printed in the Gazette.]

1,204,000. PEDAL ATTACHMENT. EMIL FRANKE, Long Island City, N. Y. Filed Mar. 28, 1916. Serial No. 87,331. (Cl. 74—81.)



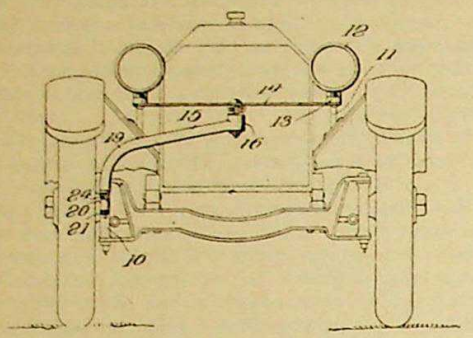
A device as described comprising a plate having guides located within its edge, pliable metal grippers held upon the plate by guides and having end portions extending beyond the edge of the plate, said plate also having lugs located at its edge and adapted to hold a cushion.

1,204,001. ATTACHMENT FOR CONNECTING THE FRAME AND AXLE OF AN AUTOMOBILE. HAROLD C. FRIPP, Walterboro, S. C. Filed Dec. 15, 1915. Serial No. 67,029. (Cl. 267—53.)



An attachment of the character described, comprising an approximately T-shaped member including a transverse head to be arranged beneath and adjacent the lower surface of the front leaf spring of an automobile, and a shank rigidly secured to and depending from the head, U-bolts serving to bind the head to the leaf spring and the leaf spring to the frame of the vehicle, a socket member arranged upon one side of the front axle and having an opening to receive the shank, and means to secure the socket member to the front axle.

1,204,002. HEADLIGHT-STEERING MECHANISM. JOSEPH T. GERMAN, Sloan, Iowa, assignor of one-fourth to John P. Hopper, Sloan, Iowa. Filed Jan. 26, 1916. Serial No. 74,371. (Cl. 240—62.)



1. In headlight steering mechanism, rotatably mounted headlights, a bar operatively connecting the said headlights to extend transversely therebetween, a drag rod freely connected to said bar and provided with a pivot pin, operating means slidably receiving the said pin with the drag rod adapted to shift vertically relative to the said means, and yieldable means interposed between the said operating means and the rod for normally holding the rod against shifting movement, the said operating means being adapted for connection to an element of a vehicle steering gear whereby shifting of the said element to steer the vehicle will rotate the said headlights.

2. In headlight steering mechanism, rotatably mounted headlights, a bar operatively connecting said headlights to extend transversely therebetween, a drag rod freely connected to said bar, an operating element, and a pivot pin connecting the said rod to the said element with the rod disposed for vertical shifting movement relative to the said element, the said element being adapted for operative connection to an element of a vehicle steering gear whereby shifting of the said last mentioned element to steer the vehicle will rotate the said headlights.

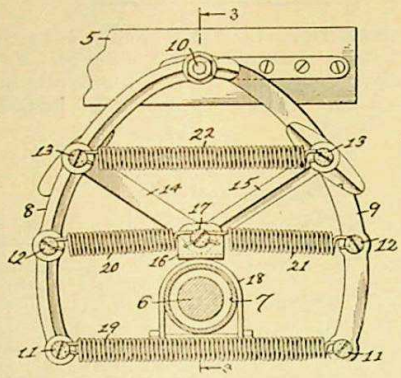
3. In headlight steering mechanism, rotatably mounted headlights, a bar pivotally connecting said headlights to extend transversely therebetween, a drag rod, a pivot pin freely connecting the rod with the said bar, a shank carried by the rod, and an attaching bracket slidably receiving said shank with the rod adapted for vertical movement relative to the said bracket and with the bracket adapted for connecting to a steering knuckle of a vehicle steering gear whereby shifting of the said knuckle to steer the vehicle will rotate the said headlights.

4. In headlight steering mechanism, rotatably mounted headlights, a bar operatively connecting said headlights to extend transversely therebetween, a drag rod provided with a head having an elongated opening therethrough, a bolt extending freely through said opening to pivotally connect the rod with the said bar with the bolt adapted to shift laterally and vertically within the opening for permitting independent vertical and lateral shifting movement of the rod relative to the bar, and a spring surrounding the bolt and interposed between the bar and said head for normally holding the rod against vertical shifting movement, the rod being adapted for operative connection to an element of a vehicle steering gear whereby shifting of the said element to steer the vehicle will rotate the said headlights.

1,204,003. VEHICLE-SPRING. MARK PASSMORE GILLEN, San Diego, Cal. Filed June 21, 1916. Serial No. 104,952. (Cl. 267—8.)

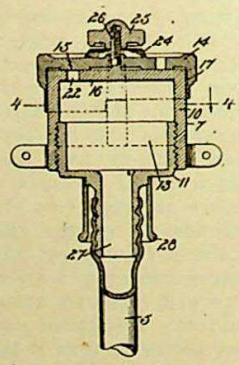
1. In a wheeled vehicle, a suspension for the frame comprising, at each axle end, two arms in pivotal connection, two equalizing levers pivoted to the respective arms and to each other, a plurality of springs joining said arms, and a plurality of springs joining said arms with the pivot of said levers.

2. In a wheeled vehicle, a suspension for the frame comprising, at each axle end, two downwardly divergent arms pivoted together and to said frame, two upwardly diverging levers pivoted together and to the respective arms, a saddle on the axle in pivotal connection with said levers at their common pivot, a coil spring joining the upper portions of said arms, at each side thereof, at the pivotal points with the respective levers, two springs on each side of said arms joining the latter with said saddle, and springs at the lower ends of said arms resisting separation thereof.



3. In a wheeled vehicle, a suspension for the frame comprising, at each axle end, two downwardly divergent arms pivoted together and to said frame, a saddle on said axle, two upwardly divergent levers pivoted together and to said saddle and to the respective arms, a coil spring at each side of said arms joining the latter at their pivotal connections with said levers, two coil springs at each side of said arms joining the latter with said saddle, and two springs at each side of said arms joining the outer ends thereof with said axle.

1,204,004. AUXILIARY AIR-SUPPLY DEVICE FOR INTERNAL-COMBUSTION ENGINES. HUGH C. GILLIAM, Philadelphia, Pa., assignor of one-third to Frank H. Preble and one-third to Florence J. Dentel, Philadelphia, Pa. Filed June 15, 1916. Serial No. 103,835. (Cl. 137—26.)



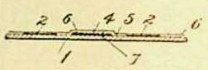
1. In a valve structure for admitting air to the manifold of an explosive engine, a pair of sections removably connected together, the lower section being formed with an extension for receiving a connecting hose and the upper section being formed with an arc-shaped slot, a disk valve arranged on said upper section provided with a plurality of openings and an annular bead forming a valve seat, said openings extending through said valve seat, and means for holding said valve seat against said upper section.

2. In a valve of the character described, an upper section, a lower section threaded to said upper section, means for connecting a hose to said lower section, said upper section being formed with an arc-shaped slot and with a ground upper face, a disk valve member provided with a projecting annular bead formed with a ground seat fitting on said upper section, said seat covering said slot, said disk valve member being provided with an opening ex-

tending through said valve seat, said disk valve member being rotatable so that said openings may be brought into registry with said slot and moved out of registry, and means for limiting the rotary movement of said disk valve member.

3. In a valve of the character described, a hollow body provided with an arc-shaped opening in the top, a disk valve member fitting on said body, said disk valve member being formed with a depending flange having a notch extending for approximately one-half of its circumference whereby two shoulders are produced, a series of openings adapted to be brought into registry with said slot, said openings increasing in size from one end of the series to the other, a seat, a combined pointer and stop connected with said body to strike against said shoulders for limiting the rotary movement of said disk valve member, and resilient means for pressing said disk valve member against said body.

1,204,005. PROCESS OF ORNAMENTING METAL. GEORGE J. GLOTZBACH, Austin, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed June 8, 1914. Serial No. 843,752. (Cl. 41—26.)



1. A process for the ornamentation of metal, to produce the effect of etching, which consists in applying to the metal plate in powdered condition a material capable of being rendered substantially transparent and arranged according to the desired design, and applying to the plate over the said material a varnish to render the said material substantially transparent and produce the effect of being etched.

2. A process for the ornamentation of metal, to produce the effect of etching, which consists in applying to the metal plate a substantially transparent gum in comminuted form and arranged according to the desired design on those parts of the plate which are to appear etched out, leaving exposed parts of the plate which are to appear in relief, drying the gum, and applying over the gum a gloss varnish; substantially as specified.

3. A process for the ornamentation of metal, which consists in printing the desired design upon the plate with varnish or sizing, then applying to the plate comminuted gum and causing it to adhere to the varnish or sizing, and then after the gum is dry applying over the gum a gloss varnish; substantially as specified.

4. A process for the ornamentation of metal, which consists in lithographing a design upon a metal plate, in any desired colors; then lithographing a design on the plate, with an adhesive; then applying gum in comminuted form on the adhesive; and then, after the gum is dry, applying a varnish over the gum to render it substantially transparent; substantially as specified.

5. A metal plate having a design thereon in the semblance of an etching, and composed of an adhesive and comminuted gum held by the adhesive, the gum being rendered substantially transparent by an externally applied varnish; substantially as specified.

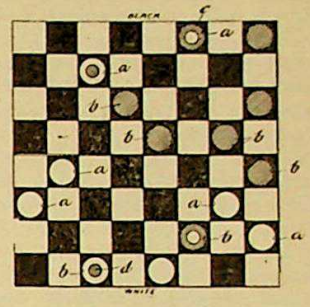
[Claim 6 not printed in the Gazette.]

1,204,006. GAME. LEON GOLDMERSTEIN, New York, N. Y. Filed Jan. 24, 1916. Serial No. 73,995. (Cl. 46—64.)

1. A set of pieces for the game of checkers, in which each piece is provided, at one side thereof, with indications of king value, half the number of said pieces representing white kings by said indications, and the other half black kings.

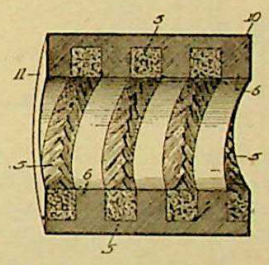
2. A set of reversible play pieces for the game of checkers, wherein each piece has indications representing different play values upon its opposite sides, the indications on one side of some of said pieces representing "white" king value, and on the others "black" king value.

3. A set of reversible play pieces for the game of checkers, wherein each piece has on one side a representation of ordinary checker value, and on the other side a repre-



sentation of king value, the white pieces including some with "white" king value and some with "black" king value, and the black pieces including some with "black" king value and some with "white" king value.

1,204,007. PACKING FOR PUMP-RODS. BYRON W. GOODSELL, Chicago, Ill. Filed Mar. 27, 1913. Serial No. 757,158. (Cl. 154—45.5.)



1. A packing consisting of a number of strips or rings of braided cotton fiber, and a resilient material spacing and thereby separating the wearing surfaces of said strips or rings from each other.

2. A packing consisting of a number of strips or rings of braided cotton fiber, and separate strips or rings of a resilient material alternately spacing said first named strips or rings from each other.

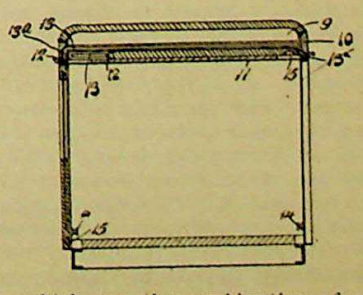
3. A packing, the wearing surface of which consists of strips or rings of braided cotton fiber and pure rubber, arranged alternately one with the other.

4. A packing, the body of which is composed of rubber, and strips or rings of braided cotton fiber embedded and spaced apart in said rubber.

5. A packing, the wearing surface of which consists of separate strips or rings of braided cotton fiber and rubber, alternately separating said strips or rings, and a surrounding external cover consisting of resilient vulcanized rubber.

[Claim 6 not printed in the Gazette.]

1,204,008. VEHICLE-TOP. WILLIAM B. GOODWIN, Columbus, Ohio. Filed May 11, 1914. Serial No. 837,657. (Cl. 21—14.)

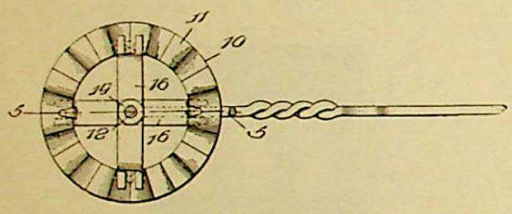


1. In a vehicle top the combination of a double roof, partitions extending transversely of the roof and dividing it into a series of panel holding compartments, rigid

panels extending the full height of the vehicle body and adapted either to close the sides of the vehicle or to occupy the compartments, ways provided on the partitions for slidingly mounting the panels in the compartments so that the panels of one side of the vehicle will occupy a position above the panels of the other side of the vehicle, rigid doors adapted to close the compartments, and flanged roof support members the panels being adapted to be secured to the flanges of the support members when in operative position.

2. In combination in a vehicle body, a double roof having compartments formed therein and open at opposite sides, supports adapted to support the roof, rigid panels extending the full height of the vehicle body and removably mounted on the supports, ways provided in the roof adapted to slidingly mount the panels, said ways having downturned ends adapted to hold the upper ends of the panels in position against the supports, rigid doors adapted to close the open sides of the compartments, and flanged roof support members, the panels being adapted to be secured to the flanges of the support members when in operative position.

1,204,009. CAKE-CUTTER. OSCAR J. GOODWIN, Rainier, Wash. Filed May 10, 1916. Serial No. 96,665. (Cl. 107—49.)



1. An implement of the class described comprising an annular cutter member, a plurality of arms crossing each other intermediate the ends and perforated to receive an axle and each with a plurality of clefts to form tongues, said tongues bearing upon opposite sides of the annular cutting member to couple the arms thereto, and a handle in which said axle is disposed.

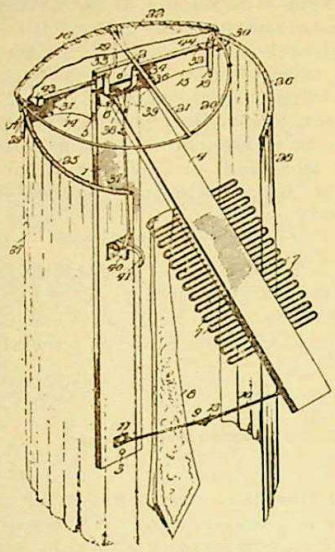
2. An implement of the class described comprising an annular cutter member, a plurality of arms crossing each other intermediate the ends and perforated to receive an axle and each with a plurality of clefts to form tongues, said tongues bearing upon opposite sides of the annular cutting member and one of said tongues bent laterally and extended through an aperture in the cutting member, and a handle in which said axle is disposed.

1,204,010. SUPPORTING AND EXHIBITING APPARATUS. JAMES H. GORE, Washington, D. C. Filed Oct. 5, 1915. Serial No. 54,196. (Cl. 211—17.)

1. In an exhibiting apparatus or display rack, the combination of a carrier movable approximately vertically from a non-display to a display position, means on said carrier for detachably supporting individually and separately in a suspended position a plurality of articles to be displayed such as neckties, a cover movable from a closed protecting position to an open display position, and means automatically moving one of said parts upon movement of the other.

2. In an exhibiting apparatus or display rack, the combination of an article carrier movable approximately vertically from an upright non-display to an outstanding display position, means on said carrier for detachably supporting individually and separately in a suspended position a plurality of articles such as neckties, a cover movable approximately horizontally from a closed protecting position about the carrier when in its upright non-display position to an open display position, and means automatically moving one of said parts upon movement of the other.

3. In an exhibiting apparatus or display rack, the combination of a main frame, an article carrier pivoted at its upper end to said main frame and adapted to be swung upward from its depending non-display position to an outstanding display position, a plurality of supporting members on said carrier adapted to detachably support individually and separately a plurality of articles such as neckties, a cover movable approximately horizontally from a closed protecting position about the carrier in its depending position to an open display position, and means automatically moving one of said parts upon movement of the other.

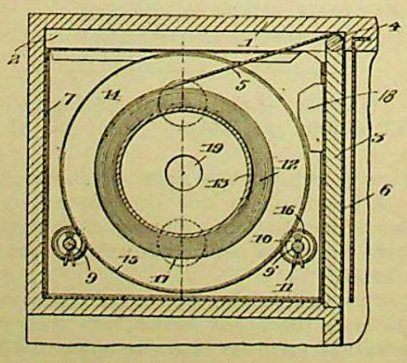


4. In an exhibiting apparatus or display rack, the combination of an article carrier movable approximately vertically from an upright non-display position to an outstanding display position, a plurality of supporting members on said carrier adapted to detachably support individually and separately a plurality of articles such as neckties, a plurality of cover sections movable from a closed protecting position about the carrier in its upright non-display position away from each other to an open display position, and means associated with the carrier and cover sections automatically moving one upon movement of the other.

5. In an exhibiting apparatus or display rack, the combination of an article carrier movable from a display to a non-display position, means on said carrier for detachably supporting individually and separately in a suspended position a plurality of articles to be displayed such as neckties, a cover movable from a closed protecting position about the carrier and articles thereon to an open display position, and means automatically moving the cover during a part only of the movement of the carrier to and from its display position.

[Claims 6 to 10 not printed in the Gazette.]

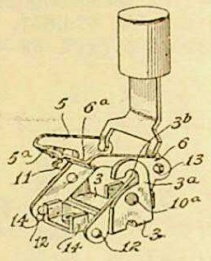
1,204,011. PHOTOGRAPHIC-ROLL HOLDER. JOHN S. GREENE, Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I., a Corporation of Rhode Island. Filed June 25, 1914. Serial No. 847,329. (Cl. 242—70.)



In a roll holder for photographic cameras, the combination with a box or casing, of two relatively spaced flanged

rollers arranged therein at each end near the bottom thereof, a film spool arranged in the casing and having the rims or edges of its end flanges resting upon the rollers to revolubly sustain a roll of film wound on the spool by revolving against the rollers as the film is drawn off, said rollers being so arranged as to position the spool with its flanges out of contact with the bottom wall and the two side walls of the casing and protuberances on the end walls of the casing engaging the end faces of the flanges of the spools to hold them in position on the rollers.

1,204,012. SNAP-SWITCH. MONROE GUETT, Hartford, Conn., assignor to Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 27, 1915. Serial No. 68,916. (Cl. 175—293.)



1. In a snap switch, the combination of a stamped sheet metal bracket having hook bearings formed therein, a crank shaft introduced laterally into said bearings, a tensioned spring connected by one end to said crank shaft, and actuating means connected to the other end of said spring and adapted to carry the same across the plane of said crank shaft in either direction.

2. In a snap switch, a bracket member, a crank shaft member journaled therein, a rocker member fulcrumed on the base, each of said members being formed of sheet metal stampings, in combination with a spring secured by one end to the crank shaft and by the other end to said rocker member and adapted to be carried thereby across the plane of the crank shaft.

3. In a snap switch, a bracket provided with bearings, a flat crank shaft member formed of stamped sheet metal engaging said bearings by its edge, means including a spring for imparting a snap movement to said crank shaft upon its said bearings, and a contact blade carried by the crank shaft.

4. In a snap switch, the combination with a bracket having open bearings therein, of a crank shaft engaging said bearings and integral shoulders on said crank shaft for preventing endwise displacement thereof.

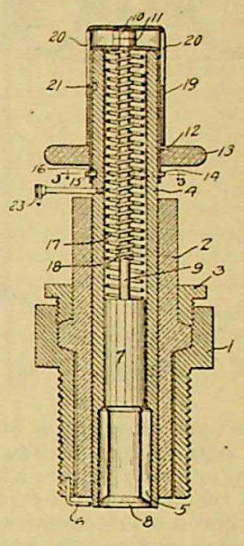
5. In a snap switch, the combination with a bracket member and a crank shaft fulcrumed thereon, of a two-part rocker member also fulcrumed thereon, and a spring connecting said shaft to the rocker and serving to lock the parts of the latter in their normal position.

[Claims 6 to 11 not printed in the Gazette.]

1,204,013. SPARK-PLUG PRESSURE-INDICATOR. ERNEST HANNI, San Francisco, Cal. Filed Nov. 6, 1915. Serial No. 60,163. (Cl. 123—169.)

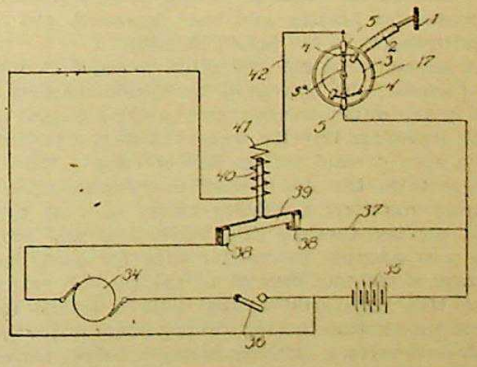
1. In a device of the class described, a spark plug having an insulating bushing, an electrode and a threaded bushing adapted to be screwed into an opening in the explosion engine cylinder, a piston therein having a flange on its lower end, said flange forming with that portion of the plug in which it is slidable a valve to prevent the egress of exploded gas, a spring bearing upon said piston, and means to raise or lower the piston and spring whereby the piston may be used to determine the pressure within the explosion cylinder or may have its flange seated upon that portion of the plug within which it is movable.

2. In a device of the class described, a spark plug having an insulating bushing, an electrode and a threaded bushing adapted to be screwed into an opening in the explosion engine cylinder, a piston having a flange at its lower end, which flange forms with the plug a valve to prevent the egress of gas, a light spring bearing on said piston and permitting a given movement thereof, a second heavier spring adapted to bear upon the piston when it has moved through that portion of its total possible movement, and a cap frictionally held in contact with the plug for determining the pressures within the engine cylinder.



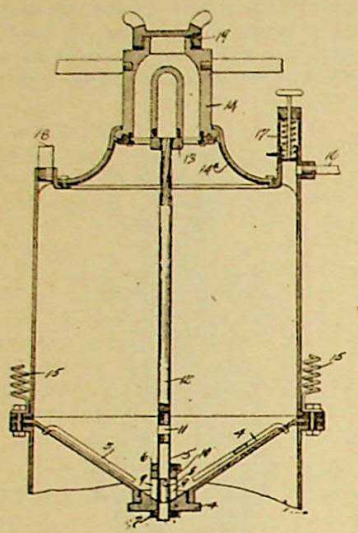
3. In a device of the class described, a spark plug having an insulating bushing, a hollow electrode and a threaded bushing adapted to be screwed into an opening in an explosion engine cylinder, a piston movable in the hollow electrode and having a flange forming a valve at the lower end thereof, a spring bearing upon the piston, and a movable cap adapted to be raised by the piston to show the amount of pressure and compression in the cylinder.

1,204,014. CONTROLLING DEVICE FOR AUTOMOBILES. JULIUS L. HECHT, Evanston, Ill., assignor of one-half to Edmund O. Schweitzer, Chicago, Ill. Filed Oct. 31, 1913. Serial No. 798,432. (Cl. 175—355.)



An electric vehicle having an electric motor, a storage battery for supplying current to said motor, a solenoid operable from said storage battery for controlling the circuit from said storage battery to said motor, said solenoid having a plunger, a speedometer having a pointer movable in accordance with the change of speed of said vehicle, contact elements to control the circuit through said solenoid, and a movable contact element electrically independent of said pointer, but movable conjointly therewith and normally without frictional engagement save when it moves into position to control the circuit through said first aforesaid contact elements.

1,204,015. ACETYLENE-GAS GENERATOR AND DEVICE FOR FEEDING CARBID. HORACE E. HENWOOD, New York, N. Y. Filed Feb. 1, 1912, Serial No. 674,650. Renewed Mar. 7, 1914. Serial No. 823,246. (Cl. 48—55.)



1. In an acetylene gas generator, a water chamber, a carbid chamber, a valve between the two, said valve being a valve operated by rotary motion, a filling head and diaphragm between the head and the chamber, said head engaging a spindle with a helical thread and capable of a motion vertically along said spindle, whereby the valve may be rotated on a vertical movement of the head.

2. In an acetylene gas generator, a water chamber, a carbid chamber, the bottom of the carbid chamber being the top of the water chamber, and having a conical shape, its apex depending into the water chamber, a bushing fitting the apex of said bottom and carrying a valve cage having ports in the side thereof in communication with the carbid chamber, a tubular valve, open at the end thereof, passing through said valve cage and provided with a port adapted to register with the ports in said valve cage, a spindle secured to the tubular valve provided at the upper end thereof with a helical thread, means for preventing the vertical movement of the spindle and attached valve, a bushing having a helical thread engaging the threads on the upper end of said spindle, a head carrying said bushing, a flexible diaphragm, carried by said carbid chamber having secured thereto said head, means for holding said head depressed, and means for admitting gas to the carbid chamber.

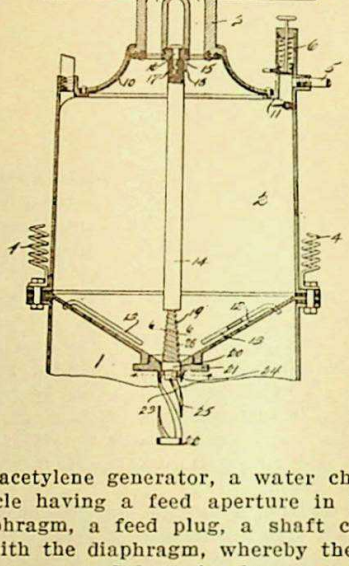
3. In an acetylene gas generator, a water chamber, a carbid chamber, the bottom of the carbid chamber being the top of the water chamber, and having a conical shape, its apex depending into the water chamber, a bushing fitting the apex of said bottom and carrying a valve cage having ports in the side thereof in communication with the carbid chamber, a tubular valve, open at the end thereof, passing through said valve cage and provided with a port adapted to register with the ports in said valve cage, a spindle secured to the tubular valve provided at the upper end thereof with a helical thread, means for preventing the vertical movement of the spindle and attached valve, a bushing having a helical thread engaging the threads on the upper end of said spindle, a head carrying said bushing, a flexible diaphragm, carried by said carbid chamber having secured thereto said head, means for holding said head depressed, and means for admitting gas to the carbid chamber, said means for admitting gas consisting of tubes from the water chamber having their ends adjacent the ports.

4. In an acetylene generator, a water reservoir, a carbid receptacle, a central aperture in the bottom of the carbid receptacle, a rotary feed valve controlling said central aperture, a shaft formed with a helical thread at its upper end, and connected at its lower end to the said rotary feed valve, and a vertically reciprocating head carrying a bushing having a helical thread engaging said shaft, whereby the vertical motion of the said head imparts a rotary motion to said shaft and said feed valve, a means for preventing a vertical movement to the shaft, and a means for filling the carbid receptacle with carbid.

5. In an automatic acetylene generator, the combination of a carbid receptacle having a feed aperture in its bottom, a water reservoir, a hollow rotary feed valve mounted to rotate about its axis concentric with the feed aperture, a vertical rotary shaft secured to said valve, a diaphragm and head movable under the action of the generated gas, and a connection between said head and shaft whereby the vertical movement of the former is converted into rotary movement in the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,204,016. ACETYLENE-GAS-GENERATOR-FEEDING MECHANISM. HORACE E. HENWOOD, New York, N. Y. Filed Feb. 1, 1912, Serial No. 674,651. Renewed Mar. 7, 1914. Serial No. 823,247. (Cl. 48—53.3.)



1. In an acetylene generator, a water chamber, a carbid receptacle having a feed aperture in its bottom, a flexible diaphragm, a feed plug, a shaft connecting the feed plug with the diaphragm, whereby the feed plug is caused to move up and down in the aperture, and means for imparting a rotary movement to the feed plug in conjunction with its vertical movement.

2. In an acetylene gas generator, a water chamber, a superposed carbid receptacle having a conical bottom provided with a feed aperture, a vertically movable head and a diaphragm connected with the head, a laterally open sleeve with helical guides communicating with the feed aperture, a feed plug in engagement with said helical guides, and a connection between the feed plug and head whereby the plug moves vertically with the head and rotates independently thereof.

3. In an acetylene gas generator, a water chamber, a superposed carbid receptacle having a conical bottom, a vertically movable head and a diaphragm connecting it with the carbid receptacle, a bushing in the conical bottom of the carbid receptacle and having a feed aperture and a laterally open sleeve with helical guides communicating with said aperture, a feed plug in engagement with said helical guides, and a connection between the feed plug and head whereby the plug moves vertically with the head and rotates independently thereof.

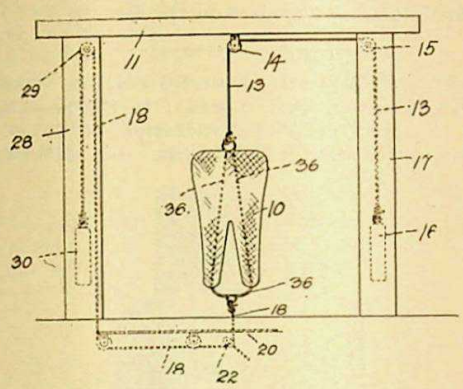
4. In an acetylene generator having a water reservoir and a carbid receptacle provided with a feed aperture, a feed plug, and means for moving said plug vertically and rotatably in the feed aperture, the feed plug having an upwardly tapering portion broken by irregularities.

5. In an acetylene generator, a water reservoir, a carbid receptacle having a central aperture in its bottom, a reciprocating filling head, a means for controlling said head, a flexible diaphragm connecting the reciprocating filling head to the carbid receptacle, a shaft connected to

and vertically movable with the reciprocating filling head, said shaft being rotatable independently of said head, a feed plug secured to the lower end of said shaft, said feed plug operating in and controlling the central aperture in the bottom of the carbid receptacle, and a means for imparting a rotary motion to said shaft upon its vertical movement.

[Claims 6 to 10 not printed in the Gazette.]

1,204,017. TACKLING-DUMMY. FRANK A. HINKEY, New Haven, Conn. Filed Feb. 29, 1916. Serial No. 81,156. (Cl. 46—69.)



1. A suspended tackling dummy, and means for restraining the same from the bottom; substantially as described.

2. The combination of a tackling dummy, means for supporting the same above the ground level, and means connected with the lower part of the dummy for restraining the same; substantially as described.

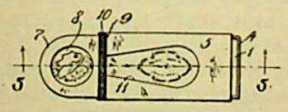
3. The combination with a suspended tackling dummy, of a counterweight connected with the dummy for restraining the lifting movement thereof; substantially as described.

4. The combination with a suspended dummy, of a counterweight, and means of connection between the counterweight and the lower portion of the dummy whereby lifting movement of such lower portion of the dummy is resisted; substantially as described.

5. The combination with a suspended dummy, of a rope connected with the lower end of the dummy, and means connected with said rope for restraining the movement of the lower part of the dummy; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,204,018. COMBINED COIN AND TICKET HOLDER. FRANK G. HOLLAND, Cleveland, Ohio, assignor to Mutual Specialty Manufacturing Company, a Copartnership consisting of Frank G. Holland, John J. Cassidy, and John Green, Cleveland, Ohio. Filed Oct. 2, 1915. Serial No. 53,757. (Cl. 133—6.)



1. A combined coin and ticket holder comprising a box having a partition therein forming coin and ticket compartments at opposite ends thereof, each compartment having a delivery opening directed toward the same end of the box, the delivery of one of said compartments being above the top of the other compartment, whereby either a coin or a ticket may be delivered without changing the position of the box in the hand.

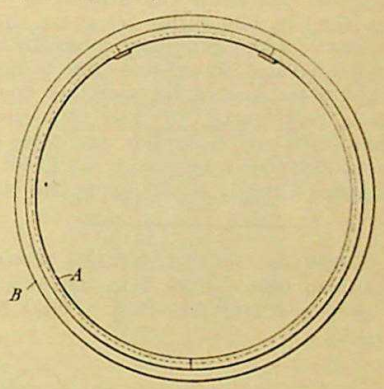
2. A combined coin and ticket holder, comprising a box having coin and ticket compartments therein and a finger opening to each compartment in the top of the box, and a delivery opening from each compartment, both of said delivery openings being directed toward the same end of the box, and the delivery opening from said ticket compartment being above and turned toward said coin compartment.

3. A combined coin and ticket holder, comprising a box with top and bottom plates, the top plate having a depending tongue secured to the bottom plate to fasten the plates together and forming a partition dividing the box into coin and ticket compartments.

4. A holder of the kind described, comprising a box with top and bottom plates, the top plate having a delivery slit and finger opening therein, and a tongue projecting inwardly from the edge of the slit and attached to the bottom plate to fasten the plates together.

5. A combined coin and ticket holder, comprising a box with top and bottom plates, and a partition extending between said plates and dividing the box into coin and ticket compartments, the front end of the box having a coin delivery slot and the rear end of the box having a ticket filling opening, the top plate having a finger opening into the coin compartment, and also having a finger opening into the ticket compartment, and a delivery slot at the front end thereof, and an inclined guide depending from the top plate, under said delivery slot.

1,204,019. TIRE-CARRYING RIM. ERNEST HOPKINSON, East Orange, N. J. Filed Aug. 2, 1911. Serial No. 641,910. (Cl. 152—21.)



1. A tire carrying rim for a pneumatic tire whose casing has inextensible edges, said rim comprising separate endless external tire rings, a plurality of separable disconnected arc sections, each consisting of a base portion and side flanges, each of said sections having radially abutting ends, adapted to be held in contact solely by the pressure of inflation of the tire acting on said base and flanges.

2. A rim for pneumatic tires having inextensible edges, comprising more than two independent arc sections, separable endless tire flanges located exteriorly of said arc sections, and a key piece between two of said arc sections for holding the sections in the form of a circle immediately within said tire flanges.

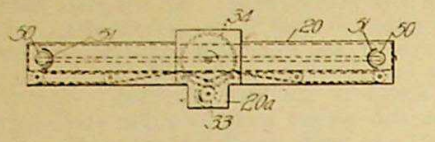
3. A rim for pneumatic tires having inextensible edges, comprising more than two independent arc sections, separable endless tire flanges located exteriorly of said arc sections, and a laterally insertible key piece between two of said arc sections for holding the sections in the form of a circle immediately within said tire flanges.

4. A rim for pneumatic tires having inextensible edges, comprising more than two independent arc sections, separable endless tire flanges located exteriorly of said arc sections, one of said sections being wedge shaped and forming a laterally movable key piece for holding the sections in the form of a circle immediately within said tire flanges.

5. A rim for pneumatic tires having inextensible edges, comprising more than two independent arc sections, and a separable endless ring located exteriorly of said arc sections, one of said arc sections constituting a laterally movable key piece for holding the sections in the form of a circle immediately within said endless ring and when displaced permitting radial removal or insertion of the remaining arc sections.

[Claims 6 to 9 not printed in the Gazette.]

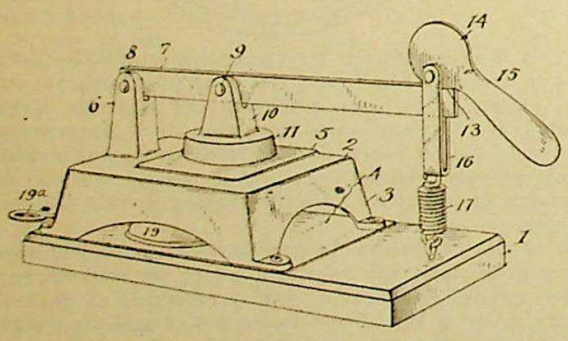
1,204,020. AUTOMOBILE-SIGNAL. TATSUO HORI, Inglewood, Cal. Filed Dec. 3, 1915. Serial No. 64,882. (Cl. 116—31.)



1. An automobile signal, embodying an elongate casing open at opposite ends, an elongate slider movable longitudinally in either direction in the casing, rollers on said casing to support said slider and allow it to move freely, and means to move the slider so that either of its opposite ends may be projected into view beyond the ends of the casing, said means embodying an operating shaft, an arm mounted on said shaft adapted for manual actuation, a pulley, a cord wound around said pulley and attached to the slider, and gear connection between the operating shaft and the pulley, the slider and casing being of such relative length that the slider is hidden within the casing when in its normal medial position.

2. An automobile signal, embodying an elongate casing open at opposite ends, an elongate slider movable longitudinally in either direction in the casing, rollers in said casing to support said slider and allow it to move freely, a pulley mounted in said casing below the slider, a cord wound around the pulley extending outwardly to the ends of the casing over said rollers and back to the center of the slider and there secured, an operating shaft mounted in bearings in said casing, and gear connection between the operating shaft and the pulley, the slider and casing being of such relative length that the slider is hidden within the casing when in its normal medial position.

1,204,021. PORTABLE VULCANIZER. EDGAR T. HORSEY, Cleveland, Ohio. Filed Mar. 5, 1915, Serial No. 12,249. Renewed May 11, 1916. Serial No. 96,943. (Cl. 18—18.)



1. In a portable vulcanizer, the combination with a hot plate, a presser head coöperating with the hot plate, a lever upon which the presser head is carried, and means beneath the hot plate for accommodating a heating means, a spring for holding the outer end of the lever which carries the presser head, and means engaging the lever for extending the spring.

2. In a portable vulcanizer, the combination with a hot plate, a presser head coöperating with the hot plate, a lever for supporting the presser head, a spring secured at one end, a cam member connected with the free end of the spring said cam member engaging the outer end of the said lever to place the spring under tension.

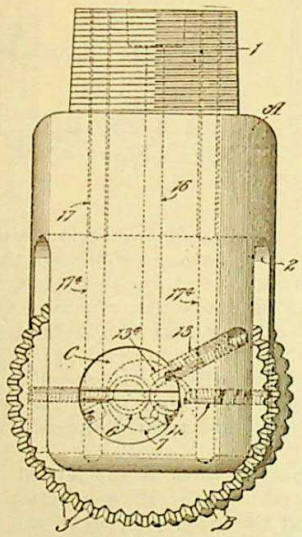
3. In a portable vulcanizer, the combination with a hot plate, a presser head coöperating with the hot plate, a pivoted lever upon which the presser head is carried, a spring secured at one end, a yoke engaging the free end of the spring, a cam lever engaging the outer end of the spring said cam lever being pivotally connected with the yoke whereby when the cam lever is operated the presser head is placed under spring pressure.

4. In a portable vulcanizer, the combination with a hollow base adapted to receive a heating device, a hot plate carried by said base, a presser head, a lever pivoted upon the base to which lever the presser head is pivoted, a spring secured at one end, a cam lever engaging the outer end of the lever which carries the presser head, operative connections between the cam lever and the free end of the spring whereby when the cam lever is operated the presser head is placed under pressure.

5. In a portable vulcanizer, the combination with a plate member, of a head member coöperating with the plate member, a pivoted lever upon which the head member is carried, a resilient means for holding the lever and means connected with the resilient means and engaging the lever for placing the resilient means under tension.

[Claims 6 to 10 not printed in the Gazette.]

1,204,022. ROTARY BORING-DRILL. HOWARD R. HUGHES, Houston, Tex., assignor to Hughes Tool Company, Houston, Tex., a Corporation of Texas. Filed Mar. 18, 1915. Serial No. 15,194. (Cl. 255—71.)



1. In a rotary boring drill, a head, a rotatable cutter arranged on said head in such a manner that it scrapes off the material from the side wall of the hole when the drill is in operation, and a rotatably adjustable bearing for said cutter having its opposite ends supported in the head and provided with an eccentrically-disposed portion on which said cutter turns, said bearing being adapted to be adjusted without removing it from the head so as to vary the distance between the center axis of the head and the portion of the cutter that acts on the side wall of the hole.

2. In a rotary boring drill, a head, a rotatable cutter arranged on said head in such a manner that it scrapes off the material from the side wall of the hole when the drill is in operation, a substantially horizontally-disposed adjustable shaft having its end portions rotatably mounted in said head, said shaft being provided with an eccentric bearing portion on which said cutter turns, and means for locking said shaft in the head so as to hold said eccentric bearing portion in adjusted position.

3. In a rotary boring drill, a head provided with an opening, an upright cutter arranged in said opening and projecting laterally from one side of said head, an adjustable shaft extending across said opening and having its end portions supported in the head, and an eccentrically-disposed cylindrical bearing on said shaft, on which said cutter turns, said shaft being adapted to be turned in the head so as to vary the position of said eccentrically-disposed bearing, and thus adjust the edge portion of the cutter inwardly and outwardly with relation to the side of the head.

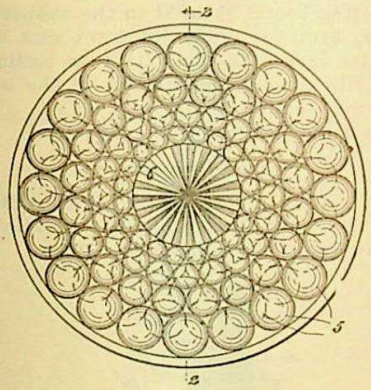
4. A rotary boring drill, comprising a head provided with a center bearing and two side bearings, rotatable cutters arranged in a substantially upright position between said bearings, and substantially horizontally-dis-

posed shafts adjustably mounted in the head in said center bearing and side bearings and provided with eccentrically-disposed portions on which said cutters revolve, said shafts being adapted to be turned in the head so as to vary the position of said eccentrically-disposed bearing portions, and thus change the distance between the edge portions of the cutters and the vertical axis of the head.

5. A rotary boring drill, comprising a head provided with transversely-disposed slots, rotatable cutters arranged in said slots and projecting laterally slightly beyond the head, adjustable supporting members for said cutters having their ends rotatably mounted in the side wall portions of said slots and adapted to be turned in the head into various positions, without removing them from the head, and means carried by said members for causing the distance between the center axis of the head and the portions of the cutters that act on the side wall of the hole to be varied when said members are turned.

[Claims 6 to 10 not printed in the Gazette.]

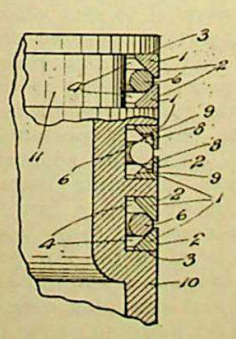
1,204,023. LIGHT-RAYS REFRACTOR. EMIL G. JOHANSON, Chicago, Ill. Filed June 24, 1916. Serial No. 105,672. (Cl. 240—106.)



1. A light rays refractor comprising a glass unit formed with protuberant lenses on both sides, said lenses being arranged in concentric circles, the circles and the lenses of the respective circles on one side being staggered with respect to the circles and the lenses of the respective circles on the other side, and the lenses in the circles on both sides of the unit increasing in size outward from the center of the unit.

2. A light rays refractor comprising a concavo-convex glass unit formed with protuberant lenses on both sides, said lenses being arranged in concentric circles, the circles and the lenses of the respective circles on one side being staggered with respect to the circles and the lenses of the respective circles on the other side, the lenses in the circles on both sides of the unit increasing in size outward from the center of the unit.

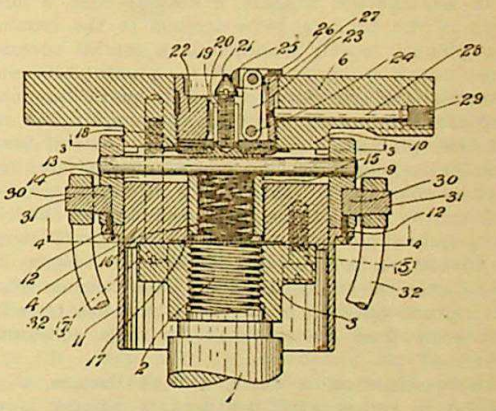
1,204,024. PISTON-RING. CHARLES E. JOHNSON, Muskegon, Mich. Filed Oct. 25, 1915. Serial No. 57,752. (Cl. 121—108.)



1. A piston ring comprising upper and lower ring parts located one above the other and having inner sides positioned at an angle to each other, each of said ring parts being parted at one point in its circumference, a circular spring member formed of a length of wire into substantially a circle and also parted at one point located between and bearing against the inner angularly positioned sides of said ring parts, said spring member being one coil of a helically wound spring whereby its ends tend to separate both laterally and circumferentially and means on said spring member engaging with the ring parts to hold them against movement with respect to each other.

2. A piston ring comprising upper and lower ring parts located one above the other and having inner sides positioned at an angle to each other, and a circular spring member formed as one coil of a spring helically wound from a rod substantially circular in cross-section located between and bearing against the inner angularly positioned sides of said ring parts and tending to force the ring parts outward and against the upper and lower sides of a groove in a piston in which the ring is located, substantially as described.

1,204,025. CHUCK. CHARLES E. JOHNSON, Muskegon, Mich. Filed Jan. 22, 1916. Serial No. 73,604. (Cl. 29—138.)



1. In combination, a shaft, a head detachably secured thereto, a cylindrical member fixed to the head, a table secured to the member, a ring passing around said cylindrical member, a rod supported at its ends in the ring and passing through a slot in said member, a ring having projecting lugs loosely mounted in an annular groove in the first ring, a yoke attached to the lugs, an interiorly bored plug set in the table at its center, a plurality of links each pivotally mounted at one end on the plug and having the other end extending outwardly toward the face of the table, heads pivotally connected to the free ends of said links, a spring secured to the plug back of each link, a clutch element carried by the free end of each spring immediately outside the face of the table, means to hold the plug rigidly in position in the table, a hollow plunger loosely located within the cylindrical member centrally thereof, said rod passing through one end of the plunger, a coiled spring inside the plunger positioned between the rod and said head, an interiorly threaded sleeve on the plunger extending into the bore of the plug, and a second plug threaded into said sleeve and having a conical head adapted to engage with the heads attached to the free ends of the links.

2. In combination, a shaft, a head detachably secured thereto, a member detachably secured to the head, a table secured to said member, a ring surrounding the member, means for effecting a longitudinal movement of the ring over the member, a rod seated at its ends in the ring and passing through a slot cut in the member, a hollow plunger loosely seated in a central opening in said member, said rod passing through one end of the plunger, a coiled spring housed by the plunger and located between the rod and said head, a centrally bored plug seated centrally in an opening in the table, a sleeve on the plunger extending into said plug, a second plug having a conical head adjustably mounted in the sleeve, a plurality of links mounted at one end in the first plug and extending

substantially parallel to the axis of the table toward the face thereof, a head secured to the free end of each link bearing against the conical head of the second plug, a spring attached to the first plug back of each link, and a clutch element attached to the free end of each spring, said element being located so as to pass over the faces of the first plug and table.

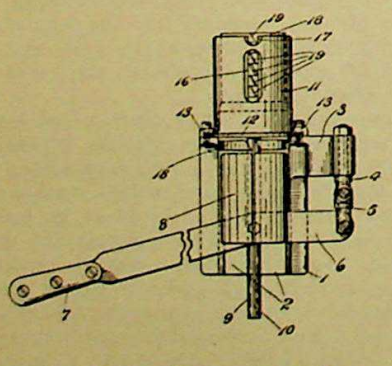
3. In combination, a shaft, a head thereon, a member secured to the head, a table secured to said member, a hollow plunger loosely seated in an opening formed centrally in said member, a rod passing through one end of the plunger and through a slot cut in the member, a spring housed in the plunger between the rod and the head, means connected to the ends of the rod for moving the plunger against the force of the spring, a plug having a central opening seated centrally in the table, an extension to the plunger passing into the plug, a member having a conical head adjustably mounted on said extension, heads loosely mounted on the plug around the conical head, leaf springs connected at one end to the plug, one for each head and normally tending to press the heads against said conical head, and a clutch element connected to the free end of each leaf spring and disposed over the face of the plug and table about the center thereof.

4. In combination, a shaft, a head thereon, a member secured to the head, a table secured to the member, a hollow plunger loosely mounted in a central opening in said member, a spring housed by the plunger between the end thereof and the head, means to move the plunger toward the head against the force of the spring, an extension to the plunger, a member having a conical head on the extension, said extension and member passing into a central opening in the table, clutch elements mounted to pass over the face of the table and around the center thereof, means normally tending to move said elements inwardly toward the center of the table, and means interposed between the conical head and said elements whereby in the normal position of the head they are forced outwardly away from the center of the table, substantially as described.

5. In combination, a shaft, a head thereon, a table connected to rotate with the head, a plunger movably mounted between the table and head and carrying a second head having diverging sides located centrally in an opening through the table, means to operate the plunger toward the table, means connected with the plunger to operate it in opposite direction, clutch elements mounted on the table around said second head and movable over the face of the table, means normally operating said elements inwardly toward said second head, and means engaging against the diverging side of said head and interposed between said head and said elements for forcing them outwardly when the head occupies its normal position, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,204,026. RING-SLOT-TESTING DEVICE. CHARLES E. JOHNSON, Muskegon, Mich. Filed Jan. 22, 1916. Serial No. 73,605. (Cl. 73—51.)



1. In a device of the character described, a support, a cylindrical testing barrel having a longitudinal slot therein, carried by the support, and means to force a plurality of piston rings through said barrel whereby the partings in said rings may pass by and be visible through the slot.

2. In a device of the character described, a body including a base having guides longitudinally disposed thereon, a cylindrical testing barrel having a slot in its upper side secured at one end of the body, and means to force a plurality of piston rings through said barrel.

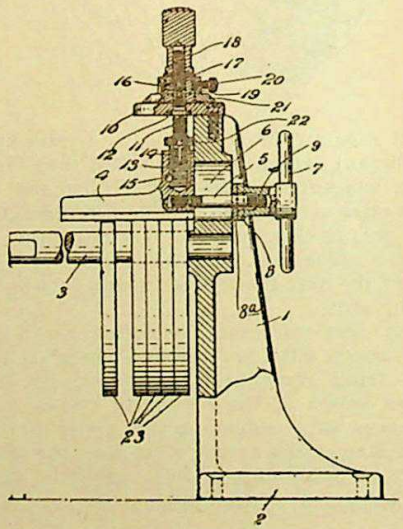
3. In a device of the character described, a body, a cylindrical testing barrel attached to the body, said barrel having a slot cut in its upper side, means to force piston rings through the barrel, and means to locate all of the rings with the partings thereon in position to pass under the slot in the barrel.

4. In a device of the character described, a body comprised of a base having upwardly and outwardly diverging longitudinally disposed guides thereon, a plunger located to move over the guides, a testing barrel secured to the end of said body in front of the plunger, said barrel being provided with a longitudinal slot in its upper side, means for reciprocating the plunger over the guides, and means on the plunger for positioning piston rings with the slots therein in upper position.

5. In a device of the character described, a support, a plunger, guides on the support for guiding the movements of the plunger, means for moving the plunger back and forth and a testing barrel secured to the support in front of the plunger, said barrel at its front end having an interior diameter larger than at its rear testing section and provided with a longitudinal slot in the upper part of the rear testing section.

[Claims 6 to 8 not printed in the Gazette.]

1,204,027. ROUGH-RING-TESTING APPLIANCE. CHARLES E. JOHNSON, Muskegon, Mich. Filed Jan. 22, 1916. Serial No. 73,606. (Cl. 33—165.)

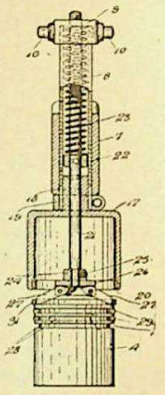


1. In combination, a support having a vertical slot therein, a rod projecting from the support, a jaw located adjacent the rod with the adjacent surfaces of the rod and jaw positioned parallel to each other, means to move the jaw on the support a measured distance, a pin attached to the jaw and extending through said slot in the support, and a member having an interiorly-threaded hub threaded onto the end of the pin to effect the clamping of the jaw to the support, substantially as described.

2. In combination, an upright support, a rod having a curved upper surface projecting therefrom a distance above the base of the support, a jaw located above the rod with its underside parallel to the upper surface of the rod, a vertical extension to the jaw positioned adjacent and parallel to the support, a plate attached to the upper end of the support and extending over said extension, a screw threaded member mounted on the plate and connecting with said extension whereby rotation of the member will raise or lower the jaw, and means for clamping the jaw at any desired position of adjustment thereof.

3. In combination, an upright support, a rod extending in substantially horizontal position from the support, a jaw having its under surface parallel with the upper surface of the rod mounted above said rod, means to clamp the jaw to the support in any of a plurality of positions, a plate attached at the upper end of the support and extending over the jaw, a vertical extension to the jaw provided with an opening extending inwardly from the upper end of the extension, a member passing through the plate and threaded at its lower end, an interiorly threaded sleeve seated in said opening in said extension into which said lower end of the member projects, a collar attached to the member above the plate, a sleeve adjustably mounted on the collar, a disk provided with radial gradations on the sleeve, and an operating head attached to the member above said collar and sleeve.

1,204,028. MACHINE FOR ASSEMBLING PISTON-RINGS AND PISTONS. CHARLES E. JOHNSON, Muskegon, Mich. Filed Mar. 20, 1916. Serial No. 85,349. (Cl. 29—84.)



1. In combination, means to hold a piston, means to expand a piston ring laid on the upper end of the piston, separate means to move the ring over the piston after it is expanded, and means to operate said expanding means and moving means, substantially as described.

2. In combination, a support, a piston holder on the support, a ring expander and a plunger movably mounted above the piston holder, and means for operating said ring expander and plunger to a lower position to expand a piston ring on and carry it over a piston held by the piston holder.

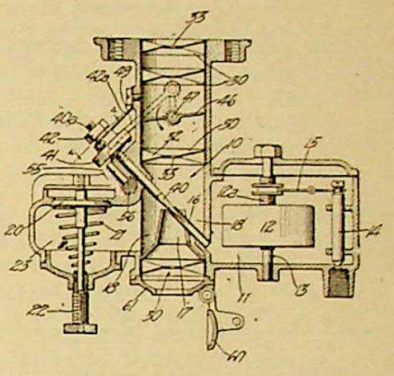
3. In combination, a support, a bracket on the support carrying a guide, a vertical tube slidably mounted for vertical movements in the guide, means for reciprocating the tube in the guide, an inverted cup-like plunger connected to the lower end of the tube, a rod movably mounted in the tube and a piston ring spreader secured at the lower end of the rod.

4. In combination, a support, a bracket adjustable on the support to different positions, a guide on the bracket, a tube positioned vertically and slidable in the guide, means for reciprocating the tube in the guide, an inverted cup-like plunger detachably connected to the lower end of the tube, a rod movably mounted within the tube and extending into the plunger, and a piston ring spreader detachably secured at the lower end of the rod.

5. In combination, an upright support, a bracket adjustable on the support to different positions, a guide on the free end of the bracket, a tube loosely mounted in the guide, a handle pivotally connected to an end of the tube, link connections between one end of the handle and the bracket, an inverted cup-like plunger attached to the opposite end of the tube, a spring between the handle and bracket normally elevating the handle and tube, a rod loosely mounted lengthwise of and extending through the tube, a spring operating the rod toward the plunger end of the tube, a head having a plurality of radial slots secured to the end of the rod which extends into the plunger, a plurality of fingers pivotally mounted on the head and positioned in the slots, and a piston holding member positioned directly below the plunger and fingers.

[Claims 6 and 7 not printed in the Gazette.]

1,204,029. CARBURETER. JOHN R. JOHNSON, Los Angeles, Cal. Filed Oct. 12, 1914. Serial No. 866,248. (Cl. 261—51.)



1. A carbureter of the class described, comprising a vertical carbureting tube, a primary air inlet embodying a nozzle of less diameter than the tube projecting upwardly into its lower end so that there is an annular space around the nozzle in the lower end of the carbureting tube, fuel inlet means embodying a fuel inlet tube extending diagonally upwardly and across the carbureting tube to a point at the center of the upper end of the nozzle, a needle valve to control discharge of fuel from said tube, auxiliary air inlet means for admitting air to the space around the nozzle, a throttle across the carbureting tube above the nozzle, and means whereby movement of the throttle causes coöperative movement of the needle valve to vary the discharge of fuel from the fuel inlet tube.

2. A carbureter of the class described, comprising a vertical carbureting tube, a primary air inlet embodying a nozzle of less diameter than the tube projecting upwardly into its lower end so that there is an annular space around the nozzle in the lower end of the carbureting tube, fuel inlet means embodying a fuel inlet tube extending diagonally upwardly and across the carbureting tube to a point at the center of the upper end of the nozzle, a needle valve to control discharge of fuel from said tube, auxiliary air inlet means for admitting air to the space around the nozzle, a throttle across the carbureting tube above the nozzle, and means whereby movement of the throttle causes coöperative movement of the needle valve to vary the discharge of fuel from the fuel inlet tube, and manually operable means for moving said needle valve to open the discharge of the fuel inlet tube.

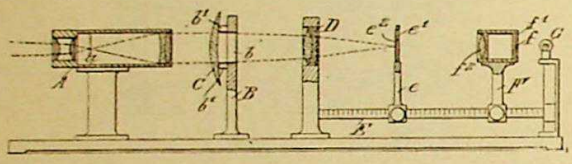
3. A carbureter of the class described, comprising a carbureting chamber, a primary air inlet thereto embodying a nozzle projecting into the chamber with an annular space in the chamber around the nozzle, a fuel inlet discharging at the inner end of said nozzle, an auxiliary air inlet admitting air to the space around the nozzle, and means for causing agitation of the stream of air drawn through the carbureting chamber.

4. A carbureter of the class described, comprising a vertical carbureting tube, a primary air inlet at the bottom of the tube embodying a nozzle concentric with and projecting up into the lower end of the tube, the nozzle being smaller than the tube so that there is an annular space in the lower part of the tube around the nozzle, fuel inlet means discharging centrally at the upper end of the nozzle, said means embodying a fuel nozzle projecting diagonally upwardly and across the nozzle to the center of its upper end, an auxiliary air inlet means admitting air to the space around the nozzle.

5. In carbureters, a carbureting and mixing tube, a primary air inlet at the bottom of the tube embodying a convergent nozzle projecting up into the tube being of

smaller diameter than the tube so as to leave an annular space around the nozzle within the tube, an auxiliary air inlet means for admitting air to the annular space surrounding the nozzle, and a fuel inlet means embodying a fuel nozzle projecting diagonally across and upwardly through the upper part of the air nozzle to the center of its upper end, and a valve stem coöperating with the fuel nozzle projecting diagonally downwardly and across above the upper end of the air nozzle in line with the fuel nozzle.

1,204,030. LENS CENTERING AND MEASURING INSTRUMENT. GUSTAV A. H. KELLNER, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed July 14, 1916. Serial No. 109,253. (Cl. 88—56.)



1. A lens centering instrument comprising an observing telescope, a support for a lens to be marked and a target focusing lens coöperating therewith, of a real target member and means for producing an image target, said real target and image target means being adjustable relatively toward and from each other and the support for the lens to be marked.

2. A lens centering instrument comprising a locating member for a lens to be marked, an observing telescope at one side of the member, a support having a fiducial line located at the other side of the member and intersecting the optical axis of the telescope, means for producing an image of a second line intersecting the axial plane of the fiducial line and a lens located to focus in the respective foci of the lens to be marked images of the fiducial line and the image of the intersecting line.

3. A lens centering instrument comprising a locating member for a lens to be marked, an observing telescope at one side of the locating member, a support at the other side thereof carrying a fiducial line and adjustable to move said line longitudinally in the optical axis of the instrument, a second adjustable support, means carried thereon for forming in said axis an image of a line intersecting the fiducial line and a lens positioned to focus into the respective foci of the lens to be marked images of the fiducial line and the image of the intersecting line.

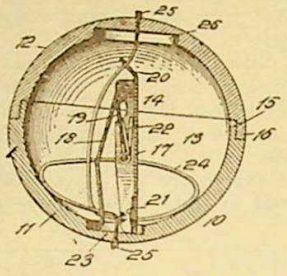
4. A target for use in measuring or centering lenses, or the like, comprising a fiducial line forming one of a pair of cross-hairs and means for producing an image of the line forming the second cross-hair, said means being adjustable to vary the position of the line image relatively to the fiducial line.

5. A target for use in measuring or centering lenses, or the like, comprising one line of a pair of cross-hairs supported to give a real observation line, and means for producing an image of a line at an angle to the real observation line, the latter and the image being disposed for view one behind the other.

[Claim 6 not printed in the Gazette.]

1,204,031. SURPRISE AND ALARM DEVICE. JAMES L. KELLOGG, New York, N. Y. Filed Aug. 9, 1916. Serial No. 113,889. (Cl. 46—46.)

1. In a device of the character described, an exterior casing composed of separable sections held together with yielding firmness by a substantially air-tight joint and forming therein a chamber, a cap-mechanism within said chamber comprising a base, a spring actuated hammer-arm to explode a cap and an outer arm to restrain the hammer-arm in its set position for operation, and means within said chamber serving to hold the cap mechanism in set condition and to release the same to act when the exterior casing is jarred, the connection of said sections and the confinement of said chamber being such that upon the explosion of the cap said sections will fly apart, and said chamber being of sufficient size to permit the cap-mechanism when jarred from its confining means to operate therein.



2. In a device of the character described, an exterior casing composed of separable sections held together with yielding firmness by a substantially air-tight joint and forming therein a chamber, a cap-mechanism within said chamber comprising a base, a spring actuated hammer arm to explode a cap and an outer arm to restrain the hammer arm in its set position for operation, means within said chamber serving to hold the cap-mechanism in set condition and to release the same to act when the exterior casing is jarred, and a loose cord connecting said sections so as to limit their extent of separation when the explosion of the cap takes place.

3. In a device of the character described, an exterior casing composed of separable sections held together with yielding firmness by a substantially air-tight joint and forming therein a chamber, a cap-mechanism within said chamber comprising a base, a spring actuated hammer arm to explode a cap and outer arm to restrain the hammer arm in its set position for operation, means within said chamber serving to hold the cap-mechanism in set condition and to release the same to act when the exterior casing is jarred, and a loose cord connecting said sections and cap-mechanism so as to limit their extent of separation when the explosion of the cap taken place.

4. In a device of the character described, an exterior casing composed of separable sections held together with yielding firmness by a substantially air-tight joint and forming therein a chamber, a cap-mechanism within said chamber comprising a base, a spring actuated hammer arm to explode a cap and an outer arm to restrain the hammer arm in its set position for operation, and a recess within said casing affording opposing walls serving to hold the cap-mechanism in set condition and to release the same to act when the exterior casing is jarred, the connection of said sections and the confinement of said chamber being such that upon the explosion of the cap said sections will fly apart, and said chamber being of sufficient size to permit the cap-mechanism when jarred from its confining means to operate therein.

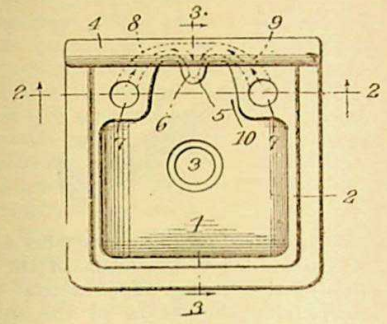
5. In a device of the character described, an exterior casing of ball-outline composed of matching sections held together in a substantially air-tight manner by a tongue-and-groove joint and forming therein a chamber, a spring-actuated cap-mechanism within said chamber for exploding a cap therein while said sections are together for driving the sections apart, and means within said chamber serving to hold the cap-mechanism in set position and to release the same to act when the exterior casing is jarred.

[Claim 6 not printed in the Gazette.]

1,204,032. MANUFACTURE OF BEVERAGE EXTRACTS. JOHN LEONARD KELLOGG, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Company, Battle Creek, Mich., a Corporation of Michigan. Filed Dec. 18, 1915. Serial No. 67,510. (Cl. 99—11.)

A soluble beverage extract comprising in its composition the extractive matter of roasted algarroba beans, soy beans, and caramelized saccharine material.

1,204,033. LAVATORY. JOHN F. KELLY, Trenton, N. J., assignor to Thomas Maddock's Sons Company, Trenton, N. J., a Corporation of New Jersey. Filed Aug. 19, 1916. Serial No. 115,785. (Cl. 4—1.)



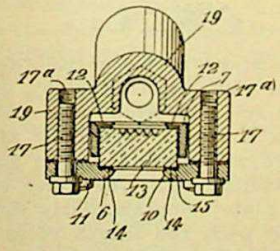
1. In a porcelain lavatory, a bowl, an integral back rising from the top thereof and an integral supply nozzle for said bowl projecting forward from said back at a point above the level of the bowl.

2. In a porcelain lavatory, a bowl, a slab integral therewith, an integral back rising above said slab, an integral supply nozzle for said bowl projecting forward from said back above said slab and supply passages leading from the slab through the back to said nozzle.

3. In a porcelain lavatory, a bowl, a back rising above the top thereof and integral therewith and a supply nozzle projecting forwardly from said back above the top of the bowl, said bowl being provided with a recess in the rear wall beneath said nozzle.

4. In a porcelain lavatory, a bowl, a slab integral therewith, an integral back rising above said slab and an integral supply nozzle projecting forward from said back at a point above said slab, said bowl being provided with a recess in the rear wall thereof symmetrically arranged beneath said nozzle.

1,204,034. WATER-GAGE FOR STEAM-BOILERS AND SIMILAR APPARATUS. EDGAR A. KELSEY, Mount Vernon, N. Y. Filed Apr. 14, 1916. Serial No. 91,132. (Cl. 73—54.)



1. A device for securing the glass in a water gage, comprising a frame plate provided with means for securing it to the gage casing, and having an opening corresponding in shape and size to the shape and size of the glass; a flange around, and partly reducing, the opening in the frame plate; a packing, conforming to the flange, and laid thereon; a frame adapted to partially inclose the glass, and means for securing the frame to the frame plate, to hold the glass inclosed thereby against the packing; substantially as herein shown and described.

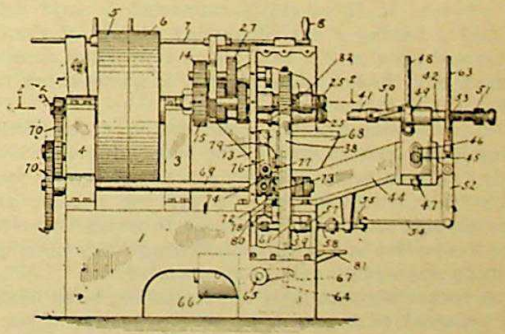
2. A device for securing the glass in a water gage, comprising a frame plate provided with means for securing it to the gage casing and having an opening corresponding in shape and size to the shape and size of the glass; a flange around, and partly reducing, the opening in the frame plate; a ridge on the inner side of the flange, a packing conforming to the flange, laid thereon; a frame adapted to partially inclose the glass, and means for securing the frame to the frame plate, to hold the glass against the packing; substantially as herein shown and described.

3. A water gage for steam boilers and for similar apparatus, comprising an open casing, provided with means for connecting it to the boiler; a plate fitted thereon, and having an opening therein, a flange surrounding the opening; an open frame, flanges on the sides in the rear of the frame; a glass fitted into the frame, and into the opening of the plate; a packing set in, between the glass and the flange surrounding the opening in the plate; means for securing the frame to the plate, and means for securing the plate upon the casing; substantially as herein shown and described.

4. A water gage for steam boilers and for similar apparatus, comprising an open casing, provided with means for connecting it to the boiler, a plate fitted thereon, and having an opening therein, a flange surrounding the opening; a ridge on the inner side of the flange; a packing laid on the flange; an open frame, flanges on the sides in the rear of the frame; a glass fitted into the frame, and into the opening of the plate; means for securing the frame to the plate, and means for securing the plate upon the casing; substantially as herein shown and described.

5. A water gage for steam boilers and for similar apparatus, comprising an open casing provided with means for connecting it to the boiler, an outlet at one end of the casing, a plug removably set therein, a plate fitted upon the casing and having an opening therein, a flange surrounding the opening; a ridge on the inner side of the flange, a packing laid on the flange; an open frame, flanges on the sides in the rear of the frame; a glass, fitted into the frame, and into the opening of the plate; means for securing the frame to the plate, and means for securing the plate upon the casing; substantially as herein shown and described.

1,204,035. SCREW-THREAD-ROLLING MACHINE. WILLIAM L. KERLIN, New York, N. Y., assignor to Edward R. Welles, New York, N. Y. Filed Oct. 15, 1913. Serial No. 795,181. (Cl. 80—6.)



1. In a screw thread rolling machine, the combination of a plurality of parallel shafts, roller dies on the ends of said shafts and a lever one arm of which forms a support for one of said shafts.

2. In a screw thread rolling machine, the combination of a plurality of parallel roller die shafts and an adjustable lever forming a support for one of said shafts.

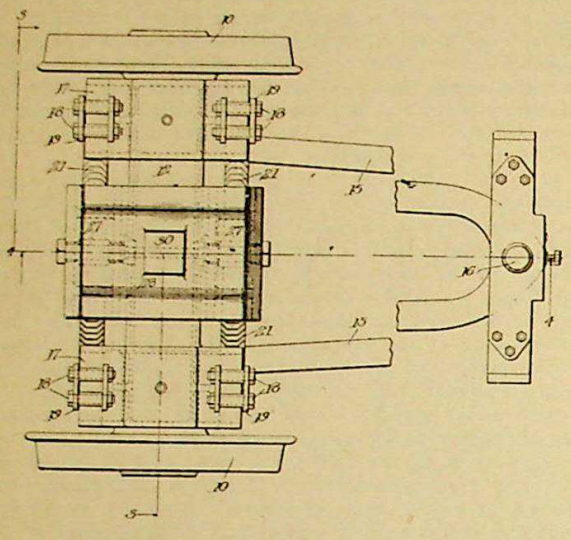
3. In a screw thread rolling machine, the combination of a plurality of parallel roller die shafts having driving pinions at one end, levers having arms adapted to bodily carry two of said shafts and means acting on said levers for adjusting the position of said shafts.

4. In a screw thread rolling machine, the combination of a plurality of parallel roller die shafts, driving pinions at one end of said shafts, a lever in one arm of which one of said shafts is rotatively mounted and means acting on the other arm of said lever to adjust the position of said shaft.

5. In a screw thread rolling machine, the combination of a plurality of parallel roller die shafts having driving pinions thereon, means for bodily adjusting one of said shafts and means for bodily moving another of said shafts to automatically discharge the bolt from between the roller dies.

[Claims 6 to 26 not printed in the Gazette.]

1,204,036. LOCOMOTIVE. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Mar. 20, 1916. Serial No. 85,428. (Cl. 105—226.)



1. In a railway vehicle, the combination of a truck including a truck bolster, a body frame, a frame supporting member rigidly secured to the frame, and a rocker having means at its lower end whereby it is pivoted on said truck bolster, and also having a bearing surface on the top end thereof upon which said supporting member is mounted, said rocker and frame supporting member having interfitting parts.

2. In a locomotive, the combination of a truck including a truck bolster, a body frame, a frame supporting member rigidly secured to the frame above said bolster, and a rocker having openings at its lower end to receive pins whereby it is pivotally connected to said bolster, said rocker having a flat supporting surface at the outer end thereof upon which said frame supporting member is mounted, said rocker being pivoted so as to swing transversely of the locomotive.

3. In a locomotive, the combination of a truck including a bolster and springs for supporting said bolster, a body frame, a frame supporting casting rigidly secured to the body frame centrally above the bolster, and a rocker pivoted on the bolster so as to swing transversely of the locomotive and having a bearing surface upon which said body supporting casting is mounted.

4. A rocker support for the purpose set forth having a head provided with a bearing surface on the upper side thereof, and having parts on the lower side thereof provided with openings whereby the rocker may be pivotally mounted on a truck.

5. A rocker support of the class described having a head provided on its top with a flat bearing surface, and having jaws at the lower end thereof provided with openings to receive pins whereby the rocker may be pivotally connected to and mounted on a truck.

[Claims 6 to 15 not printed in the Gazette.]

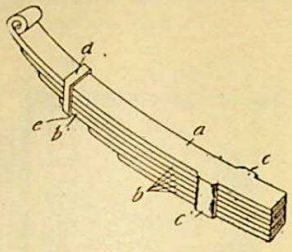
1,204,037. LAMINATED SPRING. FRANK J. LAHER, Portland, Oreg. Filed July 25, 1916. Serial No. 111,250. (Cl. 267—35.)

1. An improved laminated spring comprising a plurality of leaves, and a tie-strap welded to the edges of the leaves at the middle portion of the spring.

2. An improved laminated spring comprising a plurality of leaves, and a tie-strap welded to the edges of both sides of the leaves, the tie-straps being oppositely spaced from the middle of the spring.

3. An improved laminated spring comprising a plurality of leaves, and a tie-strap welded to the edges of both sides of the leaves at the middle portion of the spring.

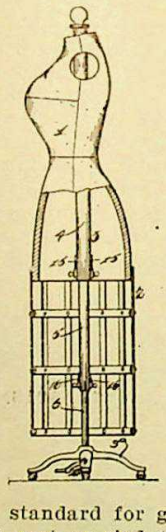
4. An improved laminated spring comprising a plurality of leaves, a tie-strap welded to the edges of the leaves at the middle portion of the spring, and supplemental tie-straps, or keepers, encompassing the leaves at the ends of the springs.



5. An improved laminated spring comprising a plurality of leaves, a tie-strap welded to the edges of the leaves at the middle portion of the spring, supplemental tie-straps, or keepers, encompassing the leaves at the ends of the springs, and one of the outermost leaves having an outwardly projecting stud-pin inserted therein.

[Claims 6 to 8 not printed in the Gazette.]

1,204,038. COLLAPSIBLE GARMENT-FORM STAND. ISAAC LEVIN, Brooklyn, N. Y. Filed Nov. 8, 1915. Serial No. 60,222. (Cl. 223—18.)



1. An adjustable standard for garment-forms, comprising a base, a fixed post carried thereby, a tubular post slidably supported by said fixed post and adapted for rotation thereupon, a clutch carried by said fixed post, consisting of a vertically movable pin, a plate carried by said pin and contacting with the inner surface of the tubular post, said plate being angularly disposed relative to the axis of said post, the length of said plate being greater than the diameter of the tubular post, and means to actuate said pin.

2. An adjustable standard for garment-forms, comprising a base, a fixed post carried thereby, a tubular post slidably supported by said fixed post and adapted for rotation thereupon, a clutch carried by said fixed post, consisting of a vertically movable pin, a plate carried by said pin and contacting with the inner surface of the tubular post, said plate being angularly disposed relative to the axis of said post, the length of said plate being greater than the diameter of the tubular post, and means to actuate said pin, said means normally contacting with but not secured to said pin.

3. An adjustable standard for garment-forms, comprising a plurality of telescoping posts, a plurality of clutches to lock the posts in adjusted positions, each of said clutches consisting of a fixed member, a movable member, and a plate actuated by the movable member arranged to contact with the inner surface of its coöperating post, each plate being angularly disposed relative to the axis of the standard, means to actuate the movable member of the lower clutch, the movable member of the upper clutch

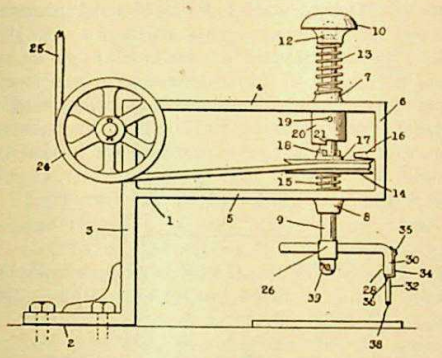
being arranged to release its plate when its movable member comes in contact with the lower clutch.

4. In an adjustable standard for garment-forms, a plurality of slidably connected tubular posts, a clutch carried by one of said posts consisting of a block secured to one of said posts, and a movable block adjacent said fixed block, together with a plate passing loosely through said blocks and contacting at each end with the inner surface of the other of said posts, said plate being angularly disposed relative to the axis of the standard, and means to actuate said movable block.

5. An adjustable standard for garment-forms comprising a plurality of slidably connected tubular posts, a clutch, consisting of a plate contacting with the inner surface of one of said posts and angularly disposed relative to the axis thereof, means carried by the other of said posts arranged to loosely support said plate, said supporting means consisting of a fixed member and a movable member, and means to actuate said movable member.

[Claims 6 to 13 not printed in the Gazette.]

1,204,039. GLASS-CUTTING MACHINE. CHARLES F. LINDEBURG, Newark, N. J. Filed Nov. 10, 1915. Serial No. 60,637. (Cl. 33—27.)



1. In a device of the character described, the combination with a frame, of a spindle rotatably and slidably mounted in said frame, a cutting tool in said spindle, clutch members one fast on the spindle and the other loose, means for driving said loose clutch member, and means normally holding the spindle slid away from the work and the clutch thrown out, said parts being arranged and adapted so that pressure upon the spindle to engage the tool with the work throws in the clutch before said tool engages the work and holds it in engagement until the tool is withdrawn from the work.

2. In a device of the character described, the combination with a frame, of a spindle rotatably and slidably mounted in said frame, a tool in said spindle, a clutch member rotatably mounted upon the spindle, means for rotating said clutch member, and a co-acting clutch member fast upon the spindle and adapted to engage or be released from the first-mentioned clutch member as the spindle is slid in one direction or the other.

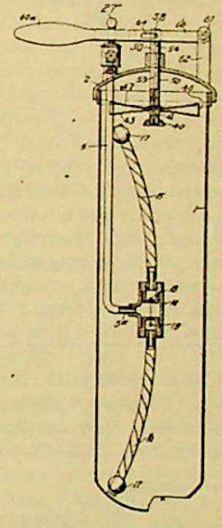
3. In a device of the character described, the combination with a frame, of a spindle rotatably and slidably mounted in said frame, a tool in said spindle, a clutch member rotatably mounted upon the spindle, means for rotating said clutch member, a co-acting clutch member fast upon the spindle and adapted to engage or be released from the first-mentioned clutch member as the spindle is slid in one direction or the other, and means for retaining the clutch members separated when the spindle is slid in one direction.

4. In a device of the character described, the combination with a frame, of a spindle rotatably and slidably mounted in said frame, a tool in said spindle, a clutch member rotatably mounted upon the spindle, means for rotating said clutch member, a co-acting clutch member fast upon the spindle and adapted to engage or be released from the first-mentioned clutch member as the spindle is slid in one direction or the other, and means for sliding said spindle in the direction for normally releasing the clutch members.

5. In a device of the character described, the combination with a frame, of a spindle rotatably and slidably mounted in said frame, a tool in said spindle, a clutch member rotatably mounted upon the spindle, means for rotating said clutch member, a co-acting clutch member fast upon the spindle and adapted to engage or be released from the first-mentioned clutch member as the spindle is slid in one direction or the other, means for sliding said spindle in the direction for normally releasing the clutch members, and means for separating the clutch members as the spindle is slid by said sliding means.

[Claims 6 to 12 not printed in the Gazette.]

1,204,040. FIRE-EXTINGUISHER. HARRY M. MCCASLIN, Elmira, N. Y., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y., a Corporation of New York. Filed Mar. 13, 1916. Serial No. 83,875. (Cl. 169—17.)



1. In an extinguisher, the combination of a fluid container having a discharge nozzle, and means communicating between said nozzle and the low part of the container in all of its positions, with a diaphragm pump mounted upon and communicating with said container.

2. In an extinguisher, the combination of a fluid container, a discharge nozzle therefor, a pump formed of two connected diaphragms supported in said container, a fixed support centrally engaging one diaphragm, a ring connecting the diaphragms at their edges and forming a contracting and expanding pump chamber, a rod engaging the other diaphragm at its center, a hand lever pivotally mounted upon the container and connected with the outer end of said rod, and valved inlet and outlet ports to the chamber between said diaphragms.

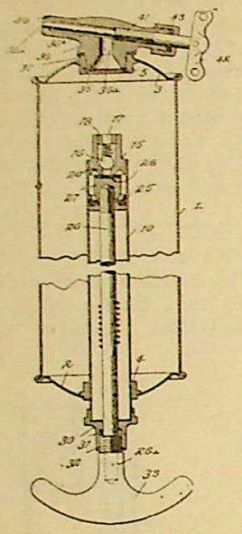
3. In an extinguisher, the combination of a fluid container, a discharge nozzle therefor, a pump supported in said container, a hand lever pivotally mounted upon the container and operatively connected with said pump, and a turn cock controlling the nozzle passage way and adapted to engage the hand lever and lock it against movement.

4. In an extinguisher, the combination of a fluid container, a discharge nozzle therefor, a pump supported in said container, a pump rod passing through a bearing opening in a wall of said container, a hand lever pivotally mounted upon the container and connected with said rod and formed with a slot, a turn cock in the nozzle, and a handle on the stem of said cock adapted to enter said slot and engage said hand lever.

1,204,041. HAND FIRE-EXTINGUISHER. HARRY M. MCCASLIN, Elmira, N. Y., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y., a Corporation of New York. Filed May 24, 1916. Serial No. 99,551. (Cl. 169—12.)

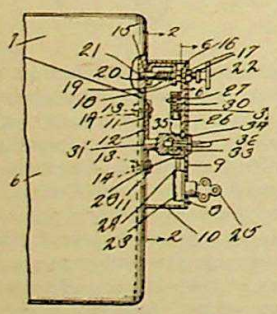
1. A fire extinguisher comprising a liquid container having a hand operated fluid expelling pump in communi-

cation with the container and a discharge nozzle communicating with the normal low point of the container and extending at an angle to the major axis thereof.



2. A fire extinguisher comprising a liquid container having a hand operated reciprocating fluid expelling pump projecting into the container from one end in line with its longitudinal axis and a nozzle mounted upon the opposite end of the container in communication with the normal low point of the container and extending at an angle to the longitudinal axis of said pump.

1,204,042. COMBINED SWITCH AND BOX LOCK. JOHN H. MCCLURE, Detroit, Mich., assignor of one-half to Fred C. McClure, Detroit, Mich. Filed Feb. 28, 1916. Serial No. 80,994. (Cl. 70—27.)



1. In a device of the class described, the combination with a box and a lid therefor, of a casing secured to said box, a plunger mounted within said casing and adapted for engagement with said top, the said plunger being provided with an annular groove, a lock in said casing having a bolt adapted for movement toward and away from said plunger, a plate mounted for sliding movement within said casing and normally engaged at one end with said bolt, the opposite end of said plate being bifurcated and adapted to fit within said groove, and means for retracting said plunger, substantially as described.

2. In a device of the class described, the combination with a box and a lid therefor, of a casing secured to said box, a plunger normally engaged with said lid, a lock within said casing, the said lock being provided with a bolt adapted for movement toward and away from said plunger, a plate normally engaged at one end with said bolt, means at the opposite end of said plate for engaging said plunger when said bolt is extended, a head on said plate, a switch stem, a nut on said stem, the said nut being provided with a flat face to be engaged by said head, and means for retracting said plate, substantially as described.

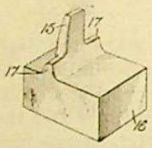
3. In a device of the class described, the combination with a switch operating knob, of a casing inclosing said knob, a lock within said casing having a bolt adapted for movement toward and away from said knob, a plate mounted for sliding movement within said casing, a head on said plate, means for yieldably holding said plate in engagement with said bolt, the said plate being provided with a longitudinally disposed slot, a stem extending through said casing and slot and supporting said knob, a nut on said stem connecting said knob, and the said nut being provided with a flat face for engagement with said head, substantially as described.

4. In a device of the class described, a casiug, a plunger mounted to extend transversely of said casing, the said plunger being provided with an annular groove, a lock adjacent the opposite end of said casing and having a bolt adapted for movement toward and away from said plunger, a plate slidably mounted within said casing with one end engaged with said bolt, the opposite end of said plate being bifurcated and adapted to engage said annular groove, the said plate being provided with a longitudinally disposed slot, a stem projecting through said slot, a nut on said stem, the said nut having a flat face adapted for engagement with said plate when the latter is extended, and means for retracting said plate, substantially as described.

5. In a device of the class described, a box having a cover, a casing secured to said box, a plunger in said casing, means tending normally to hold said plunger in engagement with said cover, a shoulder on said plunger, a lock in said casing having its bolt adapted to be moved toward and away from said plunger, a plate mounted for sliding movement within said casing and having its ends lying adjacent said shoulder and bolt respectively, and means for holding said plate engaged with said bolt, substantially as described.

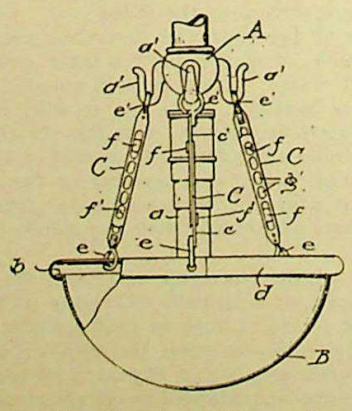
[Claims 6 and 7 not printed in the Gazette.]

1,204,043. HORSESHOE-CALK. JAMES MCDONOUGH, Montclair, N. J. Filed July 17, 1916. Serial No. 109,666. (Cl. 168—29.)



The combination with a horseshoe having a longitudinal side groove in its face, and nail holes therein, of a calk having its inner side or face provided with a tapered tang for insertion in one of said holes and lateral wedge-shaped fins formed at the base of the tang and on opposite sides of the same, the fins being adapted to seat in the groove in the manner described.

1,204,044. LIGHTING-FIXTURE. HARRISON D. MCFADDIN, East Orange, N. J. Filed July 7, 1915. Serial No. 38,403. (Cl. 240—78.)



1. A connection for supporting a lamp shade upon a fixture, embodying, in combination, a pair of elongated strips each of which is provided with a plurality of alined

slots positioned at spaced distances longitudinally of the strips, and a hook at the one end of each of said strips, the hook of the one strip being adapted to engage with any one of the slots of the other strip, whereby the length of the connection may be regulated.

2. A connection for supporting a lamp shade upon a fixture, embodying, in combination, a pair of elongated strips, each of which is provided with a plurality of alined slots positioned at spaced distances longitudinally of the strips, the hook of the one strip being adapted to engage with any one of the slots of the other strip, whereby the length of the connection may be regulated, and means for locking said hooks against inadvertent disengagement from the slots.

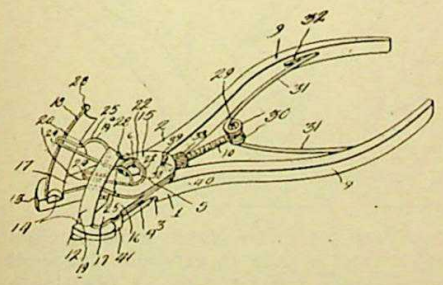
3. A connection for supporting a lamp shade upon a fixture, embodying, in combination, a pair of elongated strips, each of which is provided with a plurality of slots positioned at distances longitudinally of the strips, and a hook at the one end of each of said strips, the hook of the one strip being adapted to engage with any one of the slots of the other strip, whereby the length of the connection may be regulated, and a projection on the inner side and near the free end of each of said hooks which projection is adapted to engage with a portion of the cooperating strip intermediate the slots thereof for the purpose of locking the hook in predetermined position.

4. A connection for supporting a lamp shade or reflector upon a fixture, embodying, in combination, a pair of elongated members each of which is provided with a plurality of openings positioned longitudinally of said members, and an attaching member at one end of each of said members, the attaching member on the one member being adapted to engage with any one of the openings of the other member, whereby the length of the connection may be regulated.

5. A connection for supporting a lamp shade or reflector upon a fixture, embodying, in combination, a pair of elongated members each of which is provided with a plurality of openings positioned longitudinally of said members, an attaching member at one end of each of said members, the attaching member on the one member being adapted to engage with any one of the openings of the other member, whereby the length of the connection may be regulated, and means for locking said attaching members against inadvertent disengagement from the openings of the respective members.

[Claim 6 not printed in the Gazette.]

1,204,045. HOG-RINGER. WILLIAM L. MCGOWAN, Galt, Mo. Filed Apr. 5, 1916. Serial No. 89,101. (Cl. 128—27.)



1. In a hog ringer as set forth, a pair of members crossing each other, a pivot pin pivotally uniting said members at their crossing point, said members having clenching jaws provided with clenching pockets forward of their pivot and terminating rearwardly in operating handles, a pair of plates pivoted flatwise one upon the other upon the pivot pin and terminating at their forward ends in curved channeled magazine jaws, said plates having means to limit the jaws so that the pockets will register with the magazine jaws when the clenching jaws are opened, a screw on the pivot pin, and a member on the screw having connections with said plates for adjusting the same, whereby the magazine jaws may accommodate hog rings of different sizes.

2. In a hog ringer as set forth, a pair of members crossing each other, a pivot pin pivotally uniting said members at their crossing point, said members having clenching jaws provided with clenching pockets forward of their pivot and terminating rearwardly in operating handles, a pair of plates pivoted flatwise one upon the other upon the pivot pin and terminating at their forward ends in curved channeled magazine jaws, said plates having means to limit the jaws so that the pockets will register with the magazine jaws when the clenching jawse are opened, a screw on the pivot pin, and a member on the screw having connections with said plates for adjusting the same, whereby the magazine jaws may accommodate hog rings of different sizes, and a spring device having spring arms mounted upon the pivot pin and designed to bear upon a plurality of hog rings mounted in the magazine jaws.

3. In a hog ringer as set forth, a pair of members crossing each other, a pivot pin pivotally uniting said members at their crossing point, said members having clenching jaws provided with clenching pockets forward of their pivot and terminating rearwardly in operating handles, a pair of plates pivoted flatwise one upon the other upon the pivot pin and terminating at their forward ends in curved channeled magazine jaws, said plates having means to limit the jaws so that the pockets will register with the magazine jaws when the clenching jaws are opened, a screw on the pivot pin, and a member on the screw having connections with said plates for adjusting the same, whereby the magazine jaws may accommodate hog rings of different sizes, and a spring device having spring arms mounted upon the pivot pin and designed to bear upon a plurality of hog rings mounted in the magazine jaws, the lateral extremities of the magazine jaws having lugs to be engaged by the spring arms of the spring device to hold the spring arms out of the way while inserting a plurality of hog rings in magazine jaws.

4. In a hog ringer as set forth, a pair of members crossing each other, a pivot pin pivotally uniting said members at their crossing point, said members having clenching jaws provided with clenching pockets forward of their pivot and terminating rearwardly in operating handles, a pair of plates pivoted flatwise one upon the other upon the pivot pin and terminating at their forward ends in curved channeled magazine jaws, said plates having means to limit the jaws so that the pockets will register with the magazine jaws when the clenching jaws are opened, a screw on the pivot pin, a sleeve threaded on the screw and provided with an annular groove, and a plate arching in said groove and connected to said first named plates for adjusting the same, whereby the magazine jaws may accommodate hog rings of different sizes.

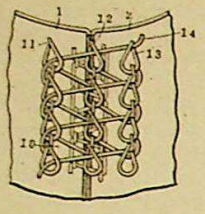
5. In a hog ringer as set forth, a pair of members crossing each other, a pivot pin pivotally uniting said members at their crossing point, said members having clenching jaws provided with clenching pockets forward of their pivot and terminating rearwardly in operating handles, a pair of plates pivoted flatwise one upon the other upon the pivot pin and terminating at their forward ends in curved channeled magazine jaws, a screw on the pivot pin, a sleeve threaded on the screw and provided with an annular groove, a plate arching in said groove and connected to said first named plates for adjusting the same, whereby the magazine jaws may accommodate hog rings of different sizes, said plates having laterally depending angular arms for limiting the clenching jaws correspondingly to the adjustment of the magazine jaws, whereby the pockets, when the clenching jaws are open, will register with the channels of the magazine jaws.

[Claim 6 not printed in the Gazette.]

1,204,046. SEAM. JOHN EDWARD MCLOUGHLIN, Utica, N. Y. Filed Aug. 22, 1914. Serial No. 858,116. (Cl. 112—34.)

1. In a seam, the combination with a jointed fabric, of three longitudinal lines of stitches connected together transversely on one side of the plane of the fabric by a thread which passes through a loop in each of said lines of stitches and around the next succeeding loop in each

of said lines, and by a thread on the other side of the plane of the fabric which passes through a loop in each of said lines of stitches and through the next succeeding loop in each of said lines, one of said longitudinal lines of stitches being on the opposite side of the joint in the fabric from one of the other said lines.

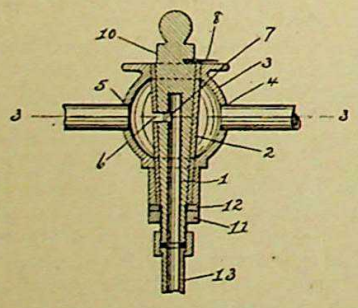


2. In a seam, the combination with a jointed fabric, of three longitudinal lines of stitches connected together transversely on one side of the plane of the fabric by a thread which passes through a loop in each of said lines of stitches and around the next succeeding loop in each of said lines, and by two threads on the other side of the plane of the fabric which pass respectively in opposite directions through a loop in each of said lines and through the next succeeding loop in each of said lines, one of said longitudinal lines of stitches being on the opposite side of the joint in the fabric from one of the other of said lines.

3. In a seam, the combination with a jointed fabric, of three longitudinal lines of stitches connected together transversely by a thread which passes over the joint and through a loop in each of said lines of stitches and around the next succeeding loop in each of said lines.

4. A fabric comprising lapped portions presenting a raw edge, a line of stitches along said edge, stitches transversely over said raw edge, the threads of the fabric included in said raw edge being compressed toward the line of union formed by said first-mentioned stitches to form a matted portion, and three additional lines of stitches generally parallel to said line of union, said transverse stitches comprising a thread which passes through the loops in each of said three additional lines of stitches and around the next succeeding loops in each of said three lines of stitches.

1,204,047. MIXING-VALVE. EDWARD MADDEN, Amsterdam, N. Y. Filed Apr. 21, 1913. Serial No. 762,449. (Cl. 137—26.)



1. A mixing device comprising a mixing chamber having an inlet and an outlet opening, a valve-case within the mixing chamber, a hollow valve plug within the valve-case having portions projecting from opposite sides thereof, one of said portions comprising operating means, and the other of said portions having an opening therethrough communicating with the hollow of said vlave plug, and said valve plug having an aperture through its wall communicating with the hollow thereof and adapted to register with an aperture in the valve-case within the mixing chamber.

2. A mixing device comprising a mixing chamber having an inlet and an outlet opening, a valve-case within the mixing chamber, a hollow valve plug within the valve-case having portions projecting from opposite sides thereof, one of said portions comprising operating means, and the other of said portions having an opening therethrough communicating with the hollow of said valve plug, and said valve plug having an aperture through its wall communicating with the hollow thereof and adapted to register with an aperture in the valve-case within the mixing chamber, and an indicator for indicating the relative positions of the apertures in the valve plug and valve-case.

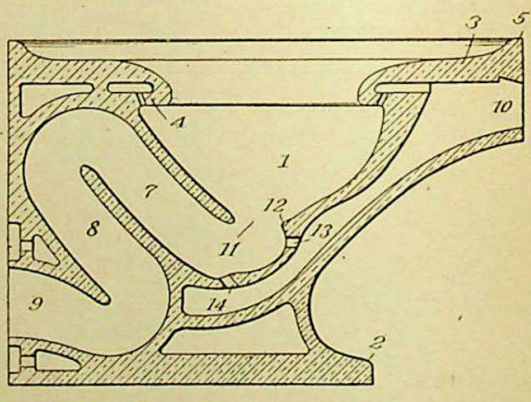
3. A mixing device comprising a mixing chamber having inlet and outlet openings, a valve-case within the mixing chamber, a hollow valve plug within the valve-case having portions projecting from opposite sides thereof, one of said portions having a supply opening therethrough communicating with the hollow of the valve plug, the valve plug having an aperture through its wall communicating with the hollow thereof and adapted to register with an aperture in the valve-case, and the other projecting portion of said valve plug having an indicator thereon for indicating the relative positions of the aperture through said valve plug and through said valve-case.

4. A mixing device comprising a mixing chamber having inlet and outlet openings, a valve-case within said mixing chamber, a rotatable valve plug within said valve-case, the valve-case having an aperture therethrough relatively longer than wide, the valve plug having an opening for registering with said aperture in the casing and having means for supplying material to be mixed to said opening and said mixing chamber being spherical.

5. A mixing device comprising a mixing chamber having inlet and outlet openings, a member projecting into said mixing chamber for supplying material to be mixed with material in said mixing chamber, said member having a substantially cylindrical part formed with a slot-like opening through the wall thereof extending for a considerable portion of its circumference through which the material to be mixed is directed toward a portion of the walls of the mixing chamber, and said portion of said walls being rounded.

[Claim 6 not printed in the Gazette.]

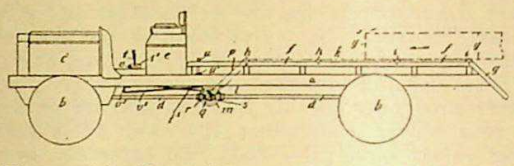
1,204,048. WATER-CLOSET. HAROLD S. MADDOCK, Trenton, N. J., assignor to Thomas Maddock's Sons Company, Trenton, N. J., a Corporation of New Jersey. Filed July 17, 1915. Serial No. 40,347. Cl. 4—22.)



1. In a siphon jet water closet, a bowl, a slab integral with the bowl and having an extended flat surface, raised edges on two sides and the back of the slab and a projecting part on the front edge concentric with the opening in the bowl.

2. In a siphon jet water closet, the combination of a bowl, siphon discharge passages, an inwardly projecting lug in the wall of said bowl adapted to form a contracted throat at the bottom of the bowl communicating between the bowl and said passages and of smaller size than said passages and two jet passages one of which is located immediately beneath said lug and arranged to direct the water horizontally across the contracted throat orifice in immediate proximity thereto whereby solid matter lodged in said throat will be directly engaged by the jet of water, the other jet being directed in line with the siphon leg substantially as and for the purpose described.

1,204,049. AUTOMOBILE-TRUCK. RALPH S. MAXWELL, Portland, Oreg., assignor of one-half to Julia M. Parker, Portland, Oreg. Filed Aug. 2, 1915. Serial No. 43,328. (Cl. 21—90.)



1. The combination with an auto truck having a longitudinal drive-shaft, of a plurality of carrying rollers transversely journaled on the body of the truck, a transverse jack-shaft, supported beneath the truck, a beveled gear fixed thereon, reversing pinions loosely mounted on said drive shaft and in mesh with said gear, said pinions made with clutch collars, and a clutch sleeve longitudinally movable on said drive shaft between said pinions, a driving connection from said transverse shaft to one of said rollers, driving connections from such roller to the other rollers, and means for throwing said longitudinally movable clutch sleeve into engagement with the clutch collar of either of said pinions.

2. In an automobile truck provided with transverse rolls journaled in the floor of the truck, connections between adjacent rolls for causing them to rotate in the same direction, driving gear connecting said rolls to the propeller shaft of the truck, means for controlling said driving gear, and means operated by the forward movement of the load on the truck for placing the driving gear in neutral position when said load reaches a predetermined position.

3. In an automobile truck provided with transverse rolls journaled in the floor of the truck, connections between adjacent rolls for causing them to rotate in the same direction, reversible driving gear connecting said rolls to the propeller shaft of the truck, a clutch lever for controlling said reversible driving gear, said clutch lever being provided with a locking bar, and means operated by the forward movement of the load on the truck for unlocking the clutch lever when said load reaches a predetermined position.

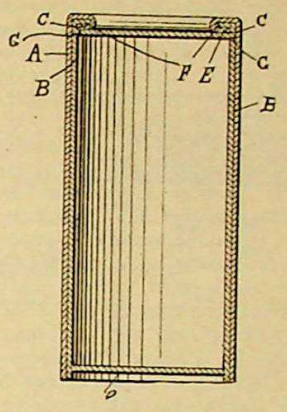
4. In an automobile truck provided with transverse rolls journaled in the floor of the truck, connections between adjacent rolls for causing them to rotate in the same direction, reversible driving gear connecting said rolls to the propeller shaft of the truck, a clutch lever for controlling said reversible driving gear, said clutch lever being provided with a locking bar, and means operated by the forward movement of the load on the truck for unlocking the clutch lever when said load reaches a predetermined position, said means comprising a trip lever, a rod underlying the locking bar of the clutch lever, and connections between the trip lever and the rod, so arranged that the rocking of the trip lever will elevate the rod and thereby unlock the clutch lever.

5. In an automobile truck provided with transverse rolls journaled in the floor of the truck, connections between adjacent rolls for causing them to rotate in the same direction, reversible driving gear connecting said rolls to the propeller shaft of the truck, a clutch lever for controlling said reversible driving gear, said clutch lever being provided with a locking bar, and means operated by the forward movement of the load on the truck for unlocking the clutch lever when the said load reaches a predetermined position, said means comprising a trip lever, a rod underlying the locking bar of the clutch lever, and connections between the trip lever and the rod, so arranged that the rocking of the trip lever will elevate the rod and thereby unlock the clutch lever, and means for returning said clutch lever to neutral position.

[Claims 6 to 11 not printed in the Gazette.]

1,204,050. CONTAINER. HOY A. MEYERS, Edon, Ohio. Filed June 9, 1915. Serial No. 33,117. (Cl. 229—12.)

1. A container containing a relatively long outer wall, a relatively short inner wall, and a cover resting on the inner wall and provided with a peripheral edge portion interlocking with the top edge portion of the outer wall to form a moisture proof, air-tight joint.

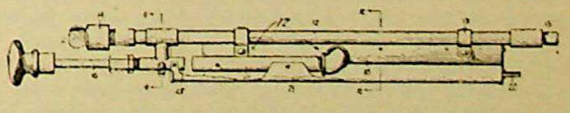


2. A container comprising a short inner wall and a long outer wall projecting above the inner wall, a cover adapted to rest on the top edge of the inner wall, and a flange carried by the cover and adapted to be interlocked with the portion of the outer wall projecting above the inner wall, said interlocking sections being then folded inward to produce a top flange for the closed container.

3. A container having a relatively short inner wall and a relatively long outer wall projecting above the inner wall, a cover adapted to seat on the inner wall and provided with an upstanding flange above which the upper portion of the outer wall projects, said outer wall being adapted to be folded inward over the flange, said flange and folded section of the outer wall being then bent laterally inward to form a top flange for the complete container.

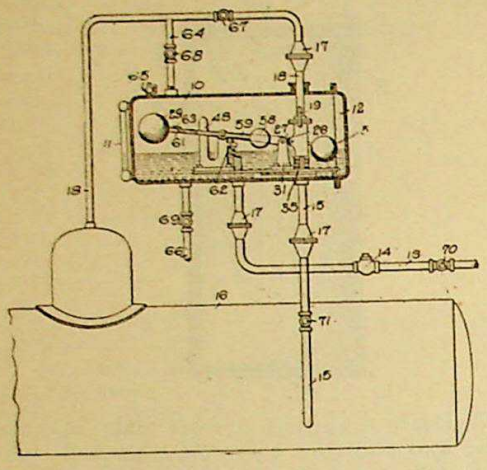
4. A container comprising a pair of tubular members one nested within the other, the outer surface of the inner member and the inner surface of the outer member being engaged throughout their extent, the ends of the outer member projecting beyond the ends of the inner member and the edges of the latter mentioned ends forming shoulders, a cover adapted to seat on said shoulders, an upstanding flange on said cover lying against the inner face of said outer member, the projecting end of said outer member being adapted to be folded inwardly from said flange, and said flange and folded end being then bent laterally and inwardly to form a top flange for the complete container.

1,204,051. HYDROCARBON-BURNER. JAMES MILLBOURN, New York, N. Y., assignor to Gas Engine & Power Co. and Charles L. Seabury & Co., Consolidated, New York, N. Y., a Corporation of New York. Filed Dec. 31, 1914. Serial No. 879,909. (Cl. 158—61.)



In a hydrocarbon burner, a tubular vaporizing chamber, a branched-out conduit from said vaporizing chamber, a needle valve controlling the outlet from said conduit, a mixing conduit adapted to receive the fuel controlled by the needle valve and separated from said branching-out conduit by an air gap, a tubular mixing chamber associated with the mixing conduit, said mixing chamber having perforations on the lateral surface thereof, means connecting said vaporizing chamber to said mixing chamber adjacent the perforations, a metallic gauze fabric roll in said vaporizing chamber between the fuel supply and the branching-out conduit, and a heating pan below the mixing chamber and extending beyond the air gap to receive fuel from the branching-out conduit, said pan having an overflow leading to a closed receptacle substantially as and for the purpose set forth.

1,204,052. FEED-WATER APPARATUS. GEORGE WILLIAM MOHR, Jersey City, N. J. Filed Nov. 12, 1915. Serial No. 61,083. (Cl. 137—101.)



1. A feed water apparatus, comprising a tank, a steam supply pipe connected with the steam compartment in the boiler or generator which is to be fed with heated water, a water supply pipe connected with a source of water supply and opening into the said tank, a water delivery pipe connected with the said boiler or generator, a valve mechanism having a valve casing connected at one end with the said steam supply pipe and at the other end with the water delivery pipe, the valve casing having connections at the upper and lower portions with the tank, and connected balanced twin valves mounted in the said casing and automatically and simultaneously controlling the said steam supply pipe and the said water delivery pipe, and a float controlled mechanism within the said tank for controlling the said twin valves.

2. A feed water apparatus, comprising a tank connected with a source of water supply for charging the tank with water, a steam supply pipe connected with the steam compartment in the boiler or generator which is to be fed with heated water for supplying the tank with steam, a water delivery pipe connected with the said boiler or generator, a valve mechanism having a valve casing connected at one end with the said steam supply pipe and at the other end with the water delivery pipe, the valve casing having connections at the upper and lower portions with the tank, and connected balanced twin valves mounted in the said casing and of which one controls the said steam supply pipe and the other controls the said water delivery pipe, and a float-controlled mechanism connected with the said twin valves for automatically and simultaneously opening and closing the said twin valves.

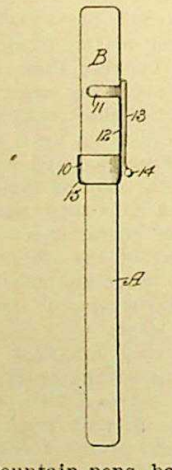
3. A feed water apparatus, comprising a tank connected with a source of water supply for charging the tank with water, a steam supply pipe connected with the steam compartment in the boiler or generator which is to be fed with heated water for supplying the tank with steam, a water delivery pipe leading from the said tank for drawing the water therefrom into said boiler or generator, a valve casing within the said tank and having a steam inlet and a water outlet intermediate the ends of the casing, the latter being connected at one end with the said steam supply pipe and at its other end with the said water delivery pipe, valve seats at the ends of the said casing and opening in the same direction, one of the valve seats opening into the said steam supply pipe and the other valve seat opening into the said water delivery pipe, twin valves controlling the said valve seats, and a float-controlled mechanism connected with the said twin valves for automatically and simultaneously moving the said valves into open or closed position on the said valve seats.

4. A feed water apparatus, comprising a tank connected with a source of water supply for charging the tank with water, a steam supply pipe connected with the steam compartment in the boiler or generator which is to be fed with heated water for supplying the tank with steam, a water delivery pipe leading from the said tank for draining the water therefrom into said boiler or generator, a valve casing within the said tank and having a steam inlet and a water outlet intermediate the ends of the valve casing, the latter being connected at one end with the said steam supply pipe and at its other end with the said water delivery pipe, valve seats at the ends of the said casing and opening in the same direction, one of the valve seats opening into the said steam supply pipe and the other valve seat opening into the said water delivery pipe, twin valves controlling the said valve seats, a strainer on the said valve body and extending over the said water outlet, and a float-controlled mechanism connected with the said twin valves for automatically and simultaneously moving the said valves into open or closed position on the said valve seats.

5. A feed water apparatus, comprising a tank connected with a source of water supply for charging the tank with water, a steam supply pipe connected with the steam compartment in the boiler or generator which is to be fed with heated water for supplying the tank with steam, a water delivery pipe connected with the said boiler or generator, a valve mechanism having a valve casing connected at one end with the said steam supply pipe and at the other end with the water delivery pipe, the valve casing having connections at the upper and lower portions with the tank, and connected balanced twin valves mounted in the said casing and of which one controls the said steam supply pipe and the other controls the said water delivery pipe, a float controlled mechanism connected with the said twin valves for automatically and simultaneously opening and closing the said twin valves, retaining means for retaining the said float controlled mechanism at the extremes of its operating positions, and releasing means controlled by the water in the tank for releasing the said float-controlled mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,204,053. CLIP FOR FOUNTAIN-PENS. WILLIAM EDGAR MOORE, Janesville, Wis. Filed July 14, 1916. Serial No. 109,267. (Cl. 120—42.)



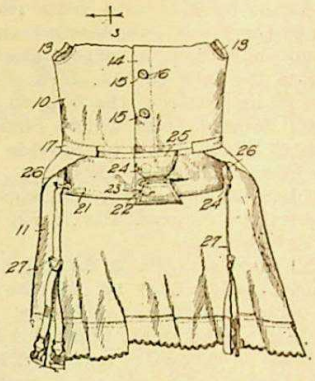
1. A clip for fountain pens, having means to clamp the same to a pen cap and prevent splitting of said cap, the same including a shank, a split band at the lower end of the shank, the ends of the band overlapping, a clip proper in fixed relation at its upper end to the shank and having the lower end terminating adjacent to the said band, and a clamp presenting resilient arms near the upper end of the said shank adapted to partially embrace the pen cap, the said split band constituting a reinforce and protector for the lower end of the cap, the lower end of the band being inturned to conform to the lower end of the cap.

2. A clip for fountain pens, including a downwardly disposed clip proper adapted to engage a pen pocket, a clamp on the clip near the upper end adapted to engage a pen cap, and a protective band at the lower end of the clip adapted to embrace the pen cap at the lower edge

thereof and constitute a reinforce to prevent splitting of said cap.

3. A clip for fountain pens, including a body, clamping means on the body to engage a pen cap, and a reinforcing protective band in fixed relation to the clip at the lower end thereof, the lower edge of said band being inturned to conform to the lower end of the cap, the band being split and having its ends overlapped, and constituting with its inturned edge a reinforce to prevent the cap from splitting.

1,204,054. COMBINED VEST AND PETTICOAT. LUCY NAHABEDIAN, New York, N. Y. Filed Jan. 27, 1916. Serial No. 74,624. (Cl. 2—145.)

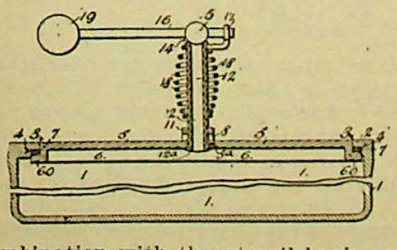


1. A garment, comprising a vest, a petticoat having a waistband permanently attached to the interior of the said vest at the waistline thereof, the material forming the said vest being extended below the waist line and doubled up to form an integral band extending within the upper portion of the said petticoat, and fastening devices attached to the said extension band beneath the said petticoat.

2. A garment, comprising a vest, a petticoat having a waistband permanently attached to the exterior of the said vest at the waistline thereof, the said vest having an integral band extending below the waistline, the said vest and its band being open along the back median line and the said petticoat having a slit at the back median line, fastening devices for closing the said back of the vest, a fastening device for closing the petticoat at the said slit, a fastening device for closing the band, and fastening devices attached to the said extension band beneath the said petticoat.

3. A garment, comprising a vest, a petticoat having a waistband permanently attached to the exterior of the said vest at the waistline thereof, the said vest having an integral band extending below the waistline, spaced buttons and pairs of tabs secured to the outer face of the said band, one pair of tabs being located at the front and rear and the other pair of tabs being located at the sides of the band, and fastening devices attached to the said extension band beneath the said petticoat.

1,204,055. HIGH-PRESSURE STEAM-COOKER. THOMAS J. NASH, Lincoln, Nebr., assignor to Nash Manufacturing Company, Lincoln, Nebr. Filed Nov. 9, 1915. Serial No. 60,591. (Cl. 53—1.)



1. In combination with the utensil having an elliptical opening, and an elliptical cover adapted to be inserted through said opening, said cover and said utensil having opposing flanges, a packing between said flanges, said flanges being adapted for seating under pressure within the utensil; of a stem mounted on the cover, a hand grip on the stem, cover holding latch bars mounted on the cover to engage the top of the utensil, said stem having a steam escape passage through the same terminating in a valve seat at the top, and a safety valve engaging said seat, substantially as shown and for the purposes described.

2. In combination with the utensil and the cover, said utensil having an opening into which the cover is adapted to be inserted, said cover and said utensil having opposing sealing flanges; of a tubular stem mounted on the cover and adapted to form a handle by which the cover may be manipulated, cover sustaining latch bars carried on the cover and adapted to be projected over the utensil, said latch bars including toggle elements having provision for engagement by the operator while holding the stem of the cover, substantially as shown and described.

3. In combination with the utensil and the cover, said utensil having an opening into which the cover is adapted to be inserted, said cover and said utensil having opposing sealing flanges, of a tubular stem mounted on the cover and adapted to form a handle, by which the cover may be manipulated, cover sustaining latch bars carried on the cover and adapted to be projected over the utensil, said latch bars including toggle elements having provision for engagement by the operator while holding the stem of the cover, said stem having a steam escape passage through the stem opening to atmosphere above the position on the stem at which the operator's hand is adapted to grasp the stem whereby the escaping steam will occur above the operator's hand, and an escape valve for controlling the outlet end of said stem.

4. In a high pressure cooker, the combination with the body having a cover opening, and a cover adapted to seat in said opening by pressure from within; of a stem projecting from said cover and having a steam escape passage through the same, said passage terminating in a valve seat at the upper end of the stem, a spiral wire handle sustained around the stem by which the operator is adapted to grip the stem to manipulate the cover, said wire handle having a loop, a valve rod fulcrumed in said loop and having a valve element to engage said seat and a weight to hold said element seated against the steam pressure, all being arranged whereby the blow-off steam will escape above the hand-hold.

5. In a high pressure cooker, the combination with a body having a cover opening, and a cover adapted to seat in said opening by pressure from within; of a stem projecting from said cover and having a steam escape passage through the same, said passage terminating in a valve seat at the upper end of the stem, a spiral wire handle sustained around the stem by which the operator is adapted to grip the stem to manipulate the cover, said wire handle having a loop, a valve rod fulcrumed in said loop and having a valve element to engage said seat and a weight to hold said element seated against the steam pressure, all being arranged whereby the blow-off steam will escape above the hand-hold, and cover supporting toggle levers mounted on the cover and stem and designed to be operated by one hand while the operator grasps the hand-hold of the stem by the other hand.

[Claims 6 to 8 not printed in the Gazette.]

1,204,056. NON-INFLAMMABLE WATERPROOFING COMPOSITION. JAMES O. PERSONS, Norfolk, Va. Filed Apr. 26, 1915. Serial No. 24,144. (Cl. 134—17.)

1. A water-proofing composition, comprising a mixture of dissolved rubber and tetrachlorid of carbon, the proportion of tetrachlorid of carbon being at least equal to that of the solvent in the dissolved rubber, to render the composition and fabric coated therewith noninflammable, substantially as described.

2. A noninflammable water-proofing composition, comprising a mixture of rubber cement, spirits of turpentine, paraffin wax, gasolene, and tetrachlorid of carbon, the proportion of tetrachlorid of carbon being at least equal

to that of the solvent, to render the composition and fabric coated therewith noninflammable, substantially as described.

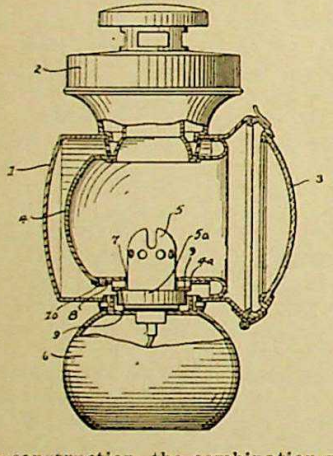
3. A composition of matter, comprising a mixture of rubber cement, spirits of turpentine, gasolene and tetrachlorid of carbon, in substantially the following proportions: 10 to 15 parts of rubber cement, 4½ to 7 parts of spirits of turpentine, 20 to 40 parts gasolene, and 40 to 75 parts tetrachlorid of carbon, substantially as described.

4. The hereindescribed composition, comprising a mixture of 10 to 15 parts of rubber cement, 4½ to 7 parts of spirits of turpentine, 20 to 40 parts gasolene, and 40 to 75 parts tetrachlorid of carbon, the physical characteristics of which are that it is noninflammable and waterproof, substantially as described.

5. A composition of matter, comprising a mixture of rubber cement, spirits of turpentine, paraffin wax, gasolene and tetrachlorid of carbon, in substantially the following proportions: 10 to 15 parts of rubber cement, 4½ to 7 parts of spirits of turpentine, 2 to 4 parts paraffin wax, 20 to 40 parts of gasolene, and 40 to 75 parts tetrachlorid of carbon, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,204,057. LAMP CONSTRUCTION. LEO L. PFEIFER, Columbus, Ohio, assignor to The John W. Brown Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed July 20, 1916. Serial No. 110,270. (Cl. 240—50.)

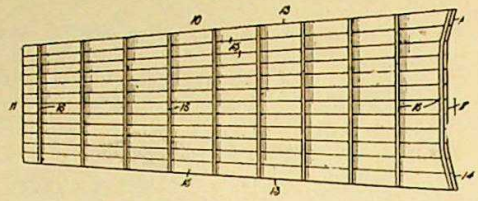


1. In a lamp construction, the combination with a lamp body comprising a main flame chamber, a lining for said flame chamber having a substantially horizontal base portion provided with a central opening, and an oil pot and burner head extending upwardly therefrom through said lining opening, of a cushioning ring having rivet openings at intervals therein, said ring being interposed between the flame chamber lining base and a lateral shoulder of said burner head, the base of the flame chamber lining having formed integral therewith outwardly extending rivet projections adapted to enter the rivet holes of said cushion ring and to have their heads flattened against the underside of the latter.

2. In a lamp construction the combination with a flame chamber lining member having a flat base portion formed with an opening therethrough, said base portion having formed at intervals therein and integral therewith about said opening, hollow rivet projections, of a burner head cushioning ring formed with rivet holes adapted to register with the rivets of said lining base, and to receive the rivet projections of said base, said rivet projections being closed at their outer ends.

1,204,058. BOAT-HULL. CARL A. PFEIFFER, New York, N. Y. Filed Mar. 22, 1916. Serial No. 85,884. (Cl. 9—6.)

1. A boat hull formed from a flat blank of approximately trapezoidal shape and bent to provide a doubled-up sharp bow, a bottom gradually increasing in width from the bow to the stern, and sides gradually decreasing in height from the bow to the stern.



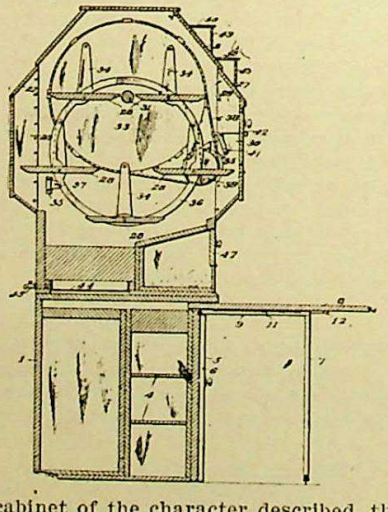
2. A boat hull formed from a flat blank of approximately trapezoidal shape and formed of longitudinally extending planks arranged side by side, and cross ribs attached to the upper faces of the planks, the blank being bent to provide a doubled-up sharp bow, a bottom gradually increasing in width from the bow to the stern, and sides gradually decreasing in height from the bow to the stern.

3. A boat hull formed from a flat blank of approximately trapezoidal shape bent to provide a doubled-up sharp vertical bow, a bottom gradually increasing in width from the bow to the stern, and sides rounded off at their lower portions to gradually merge with the side portions of the said bottom.

4. A boat hull formed from a flat blank of approximately trapezoidal shape bent to provide a doubled-up sharp vertical bow, a bottom gradually increasing in width from the bow to the stern, and sides rounded off at their lower portions to gradually merge with the side portions of the said bottom, the said sides gradually decreasing in height from the bow to the stern.

5. A boat hull formed from a flat blank of approximately trapezoidal shape and having the side portions of its stern end flaring rearwardly, the said blank being bent to provide a doubled-up bow, a bottom gradually increasing in width from the bow to the stern, and sides gradually decreasing in height from the bow to the stern, the stern ends of the said sides being inclined upwardly and rearwardly.

1,204,059. KITCHEN-CABINET. WILLIAM H. PHENICE, deceased, by Esther A. Phenice, executrix, White Hall, Ill. Filed Nov. 16, 1915. Serial No. 61,861. (Cl. 45—16.)



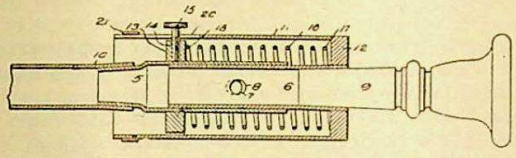
1. In a cabinet of the character described, the combination of a casing, a shaft journaled within the casing, heads carried by the shaft, revolving shelves provided at their ends with hangers engaging the heads, a ring loosely engaging the shelves to retain the same in a horizontal position, guides for the ring, and means for rotating the shaft.

2. In a cabinet of the character described, the combination of a casing, a shaft journaled within the casing, heads carried by the shaft, revolving shelves provided with hangers loosely connected to the heads, a ring loosely

connected to the shelves for holding the same in a horizontal position, a wheel mounted upon the casing, a belt for transmitting motion from the wheel to one of the heads, and means for turning the wheel.

3. In a cabinet of the character described, the combination of a casing, a shaft journaled within the casing, a head mounted upon each end of the shaft, revolving shelves mounted between the heads and provided at their ends with hangers pivotally connected to the heads, a ring having various points in the periphery thereof pivotally connected to the shelves, guide members mounted upon the casing and engaging the ring to cause the latter to hold the shelves in a horizontal position, a wheel journaled upon the casing, a belt for transmitting motion from the wheel to the shaft, and means for turning the wheel.

1,204,060. ATTACHMENT FOR WIND INSTRUMENTS. WALTER MOORE PHILLIPS, Portsmouth, Ohio. Filed May 19, 1915. Serial No. 29,107. (Cl. 84—79.)



1. In an attachment for wind instruments, a mouthpiece, two telescopic parts to one of which the mouthpiece is secured, there being an opening in each part through which the interior of the inner part may communicate with the exterior of the outer part, and resilient means for holding the parts yieldingly in normal position, and with the openings spaced from each other.

2. In an attachment for wind instruments, two telescopic tubes having passages therethrough, one of the tubes having an open end adapted to receive a mouthpiece, the other tube having an open end adapted to be attached to a wind instrument, there being openings in the sides of the tubes through which the interior of the inner tube may communicate with the exterior of the outer tube when one of the tubes is pressed to a predetermined position relatively to the other, and resilient means for holding one of the tubes relatively to the other out of the said position.

3. In a mouthpiece for wind instruments, two telescoping tubes, a casing secured to one of the tubes, the body of the casing being disposed around and spaced from the tubes, a disk secured to the other tube, and a spring disposed around the tubes and engaging the casing at one end and the disk at the other end.

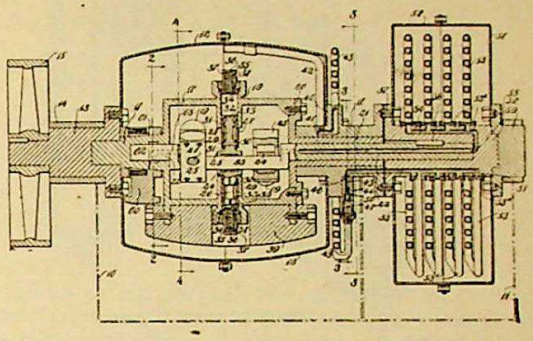
4. In a mouthpiece for wind instruments, two telescoping tubes, there being an opening in a side of each of the tubes, a casing secured to one of the tubes, the body of the casing being spaced from the tubes, a disk secured to the other tube, and a spring disposed around the tubes and engaging the casing at one end and the disk at the other end, to hold the tubes extended with the openings out of communication with each other.

5. In an attachment for wind instruments, two telescopic tubes, a casing secured to one of the tubes, the body of the casing having a longitudinal slot and being spaced from the tubes, a disk rotatably mounted on the other tube, and means disposed in the slot for securing the disk to the last-mentioned tube in adjusted position, there being an opening through the side of each of the tubes through which the interior of the inner tube may communicate with the exterior of the outer tube when one of the tubes is moved to a predetermined position relatively to the other tube.

[Claims 6 and 7 not printed in the Gazette.]

1,204,061. REFRIGERATING APPARATUS. BERNARD PLEKENPOL and JOHN B. PLEKENPOL, Cleveland, Ohio. Filed Oct. 7, 1915. Serial No. 54,630. (Cl. 62—115.)

1. In a device of the kind described, the combination with a suction chamber, of a condensing chamber surrounding the same, compression cylinders carried by the suction chamber and communicating with the suction and condensing chambers, pistons working in said cylinders, a shaft arranged within the suction chamber and operatively connected with said pistons and means for carrying the condensed refrigerating fluid from the condensing chamber as set forth.



2. In a device of the kind described, the combination with a suction chamber, of a condensing chamber surrounding the same, said suction chamber carrying a compression pump, said pump communicating with both the suction and condensing chambers, a piston working therein, a shaft arranged in the suction chamber and operatively connected with the piston and vaporizer, and means for conveying the condensed refrigerating fluid from the condenser to the vaporizer.

3. In a device of the kind described, the combination with a suction chamber, of a condensing chamber surrounding the same, a compression cylinder carried by the suction chamber and communicating with the suction chamber and the condensing chamber, a piston working therein, a shaft arranged in the suction chamber and operatively connected with the piston, a vaporizer, means for conveying the condensed fluid to the vaporizer together with means for conveying the vapor to the suction chamber.

4. In a device of the kind described, the combination with a suction chamber having a plurality of compression cylinders, each cylinder having a valved outlet, a piston working in each cylinder, a shaft arranged within the suction chamber and operatively connected with the pistons, a rotary condensing chamber surrounding said suction chamber, a rotary vaporizer and means connecting said condenser and vaporizer together with means for conveying the condensed fluid from the condenser to said vaporizer.

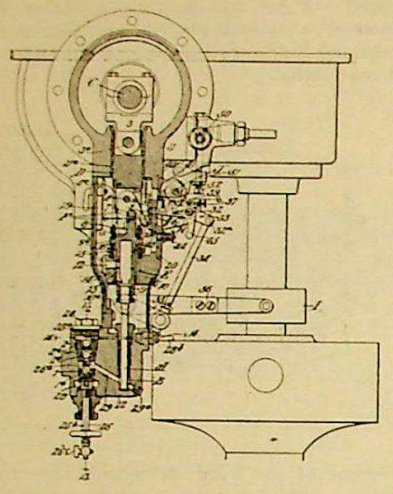
5. In a device of the kind described, the combination with a suction chamber having a plurality of compression cylinders, each cylinder having a valved outlet, a piston working in each cylinder, a shaft arranged within the suction chamber and operatively connected with said pistons, a rotary condenser surrounding the suction chamber, a rotary vaporizer and means connecting said condenser and vaporizer, means for conveying the condensed fluid from the condenser to the vaporizer, and a weight for maintaining an operative relation between the shaft and pistons as set forth.

[Claims 6 to 17 not printed in the Gazette.]

1,204,062. VARIABLE-FEED PUMP. GEORGE D. POGUE, St. Louis, Mo. Filed July 19, 1915. Serial No. 40,678. (Cl. 123—140.)

1. A variable-stroke pump provided with a plunger-operating mechanism that comprises a fixed-stroke actuating member, a variable-stroke member, a connecting means for imparting movement to said variable-stroke member when said actuating member moves in one direction, a tripping means for rendering said connecting means inoperative, an automatic controlling means that normally governs said tripping means, and an independent means for moving said tripping means relatively to said automatic controlling means so as to enable said

tripping means and said connecting means to be rendered inoperative without affecting the operation of said actuating member and said automatic controlling means.



2. A variable feed pump provided with a plunger-operating mechanism that comprises a fixed-stroke actuating member, a variable-stroke member and an interposed connecting device, a tripping device for rendering said connecting device inoperative sooner or later on one stroke of said plunger-operating mechanism, an automatic controlling means that normally governs the position of said tripping device, and a manually-operated means for enabling said tripping device to be retained in such a position that said connecting device will be held in an inoperative condition while said actuating member continues in operation.

3. A variable feed pump, comprising a plurality of cylinders, a plunger-operating mechanism coöperating with each cylinder, each of said mechanisms comprising a variable-stroke member, an automatic controlling means comprising tripping devices that govern the degree of movement of said variable-stroke members, and means whereby any one of said tripping devices may be held at rest so as to cause the particular cylinder with which it coöperates to be cut out of service while the remaining cylinders continue in operation.

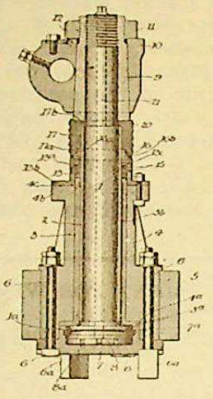
4. A variable-stroke pump provided with a plurality of cylinders, a plunger-operating mechanism coöperating with each cylinder and each consisting of a fixed-stroke actuating member, a variable-stroke member and an interposed connecting device, tripping devices that coöperate with said connecting devices for controlling the degree of movement imparted to said variable-stroke members, an automatic governing means that controls the operation of all of said tripping devices, and means for enabling any one of said tripping devices to be adjusted so as to vary the supply from the particular cylinder with which it coöperates without affecting the operation or position of the other tripping devices.

5. A variable feed pump, comprising a plurality of cylinders, a controlling device for each cylinder that governs the supply from the cylinder and which forms part of the plunger-operating mechanism, an automatically-operating governing means that is common to all of said controlling devices and which determines the position of same, and means for enabling any of said controlling devices to be adjusted independently of the others and relatively to said automatic governing means.

[Claims 6 to 30 not printed in the Gazette.]

1,204,063. BEARING FOR SHAFTS, SPINDLES, AND THE LIKE. GEORGE L. PRATT, Atlanta, Ga. Filed Jan. 30, 1912. Serial No. 674,391. (Cl. 64—22.)

1. A bearing including in combination, a shaft provided with a circumferential shoulder, a friction collar encircling the shaft, a gland member also encircling the shaft and coaxial with said collar and against which the collar is held, and a resilient collar embracing the shaft at the shouldered portion thereof and normally approximating the diameter of the friction collar and gland member for effecting the longitudinal movement of the friction collar into contact with the gland member.



2. A bearing including in combination, a shaft provided with a circumferential shoulder, a relatively non-rotatable friction collar encircling the shaft, a gland member also encircling the shaft and coaxial with said collar and against which the collar is held, and a resilient collar embracing the shaft at the shouldered portion thereof and also embracing a portion of the friction collar and adapted to press the friction collar against the gland member.

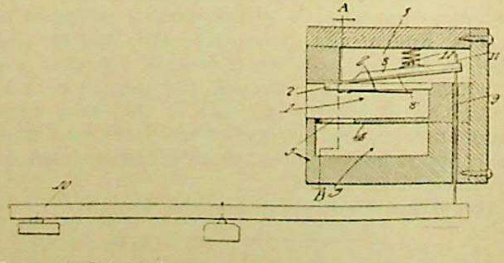
3. A bearing including a combination, a shaft provided with a circumferential shoulder, a relatively non-rotatable friction collar encircling the shaft, a gland member also encircling the shaft and coaxial with said collar and against which the collar is held, and a resilient collar embracing the shaft at the shouldered portion thereof and relatively non-rotatable, whereby it holds the friction collar against rotative movement and in intimate engagement with the gland member.

4. A bearing including in combination, a shaft provided with a circumferential shoulder, a gland member encircling the shaft and rotatable about the same, a resilient collar embracing the shaft at the shouldered portion thereof and relatively non-rotatable, and a friction collar interposed between said resilient collar and the gland member and partly embraced by the resilient collar.

5. A bearing including in combination, a shaft provided with a shouldered portion, a core member rotatable about the shaft, a gland member secured to the core member and encircling the shaft, a resilient collar provided with a flange embracing the shaft at the shouldered portion thereof, a friction collar interposed between the resilient collar and the gland member and held by the resilient collar against rotative movement while the gland and core members are rotating about the shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,204,064. REED-ORGAN. PERCY PRESTON, Denison, Tex. Filed Sept. 29, 1914. Serial No. 864,104. (Cl. 84—34.)



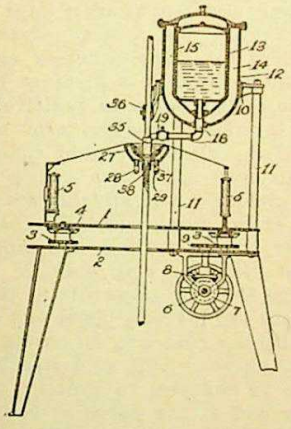
1. In a reed board, resonance cells, reed cells arranged thereabove and separated therefrom by partitions, there being openings within said partitions for maintaining communication between the reed cells and the resonance cells, and reeds attached to the tops of the reed cells,

said resonance cells being grouped, the cells of each group communicating through openings adjacent the bottoms of the resonance cells.

2. In a reed organ, a reed board having resonance cells, reed cells arranged thereabove and separated therefrom by partitions, there being openings within said partitions for maintaining communication between the reed cells and the resonance cells, reeds attached to the tops of the reed cells, said resonance cells being grouped, the cells of each group communicating through openings adjacent the bottoms of the resonance cells, a valve above each reed, a key lever, a tracker interposed between the key lever and its valve, and a spring bearing upon the valve for directing it to its seat.

3. In a reed board, resonance cells, reed cells arranged thereabove and separated therefrom by partitions, there being circular openings within said partitions for maintaining communication between the reed cells and the resonance cells, said openings gradually diminishing in diameter from the bass to the treble end of the board, and reeds attached to the tops of the reed cells, said resonance cells being grouped, the cells of each group communicating through openings in the side walls thereof adjacent the bottoms of the resonance cells.

1,204,065. BRAIDING AND COATING MECHANISM. ROBERT C. RAHM and THOMAS V. WILSON, Wyomissing borough, Pa., assignors to Textile Machine Works, Wyomissing, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1912. Serial No. 721,642. (Cl. 154—6.)

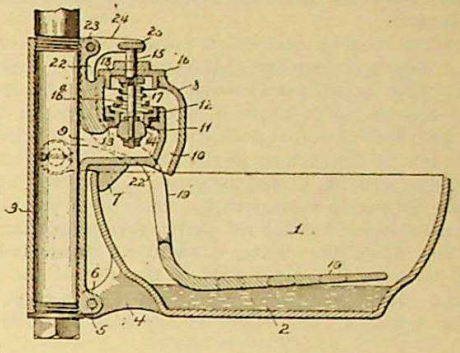


1. The combination with mechanism for making tubular fabric comprising revolving thread carriers and a take-off, of a centrally located composition cup having a cylindrical bottom opening, and fixed braiding mandrel having a reduced end portion located in said bottom opening and forming a braiding-point and an annular fabric-and-composition passage way; the braiding threads being passed through the composition cup to the braiding point and the annular passage way being adapted to permit the passage of the tubularly braided fabric in connection with a determined coating portion of the composition.

2. The combination with mechanism for making tubular fabric comprising revolving thread carriers and a take-off, of a centrally located composition cup having a cylindrical bottom opening, and an adjustably fixed braiding mandrel having a reduced end portion located in said bottom opening and forming a braiding-point and an annular fabric-and-composition passage way; the braiding threads being passed through the composition cup to the braiding point and the annular passage way being adapted to permit the passage of the tubularly braided fabric in connection with a determined coating portion of the composition.

1,204,066. WATERING DEVICE FOR CATTLE. HUGO C. RASSMANN, Beaver Dam, Wis. Filed May 8, 1916. Serial No. 96,207. (Cl. 119—75.)

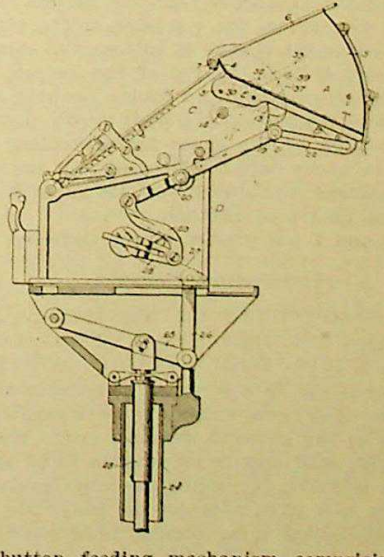
1. In a watering device for animals, the combination of a stand pipe, a bowl hinged near its bottom thereto, a latch mounted on the stand pipe and engaging the upper portion of the bowl, and animal-controlled means for discharging water from said stand-pipe to the bowl.



2. In an animal watering device, the combination of a water pipe, a bowl supported thereby, a valve casing rigid with said water pipe and projecting over the bowl, said casing having a lateral duct communicating with the water pipe and a duct discharging into the bowl, said last-mentioned duct being deflected in a direction toward the rear end of the bowl, a spring-actuated valve disposed between said ducts, and an animal-operated lever operatively associated with said valve.

3. In an animal water device, the combination with a water pipe, a bowl, a casing rigid with the water pipe and having two ducts, one of said ducts communicating with the water pipe and the other discharging into the bowl, a spring actuated valve between said ducts and provided with a stem projecting above the casing, of an animal-operated lever having a member disposed over the bottom of the bowl, said lever having an upwardly projecting part at one end, said upwardly projecting part being bifurcated forming two arms pivotally mounted near their upper ends on said pipe, said arms terminating in forwardly projecting members, and a cross bar connecting said forwardly projecting lever members and disposed over the stem of the valve.

1,204,067. BUTTON-FEEDING MECHANISM. CHARLES F. RICHARDSON, Woonsocket, R. I., assignor to Rapid Button Attaching Machine Co., New York, N. Y., a Corporation of New York. Filed July 7, 1915. Serial No. 38,587. (Cl. 218—12.)



1. A button feeding mechanism comprising a chute having a slot for receiving the shanks of buttons, a pick-up device having a channel adapted to aline with the slot of the chute, a hopper in which the pick-up device is mounted, means for actuating the pick-up device to cause the shanks of buttons in the hopper to engage in the channel of the pick-up device, said hopper having an out-

let for permitting buttons to flow down the chute, a swinging finger movable back and forth in the slot of the chute to prevent clogging at the outlet of the hopper, and means for operating the finger simultaneously with the pick-up device.

2. A button feeding mechanism comprising a chute having a slot for receiving the shanks of buttons, a pick-up device movable curvilinearly in a vertical plane from a point below to a point above a horizontal and having a channel adapted to aline with the slot of the chute, a hopper in which the pick-up device is mounted, means for actuating the pick-up device to cause the shanks of buttons in the hopper to engage in the channel of the pick-up device, said hopper having an outlet for permitting buttons to flow down the chute, a swinging finger movable back and forth in the upper part of the slot of the chute to prevent clogging of the outlet of the hopper, and means for actuating the finger as the pick-up device operates.

3. A button feeding mechanism comprising a chute having a slot for receiving the shanks of buttons, a pick-up device having a channel adapted to aline with the slot of the chute, a hopper in which the pick-up device is mounted, means for actuating the pick-up device to cause the shanks of buttons in the hopper to engage in the channel of the pick-up device, said hopper having an outlet for permitting buttons to flow down the chute, a swinging finger movable back and forth in the upper part of the slot of the chute to prevent clogging of the outlet of the hopper, a spring means operating on the finger to move the same in one direction, and connecting means between the pick-up device and finger for moving the latter in the other direction.

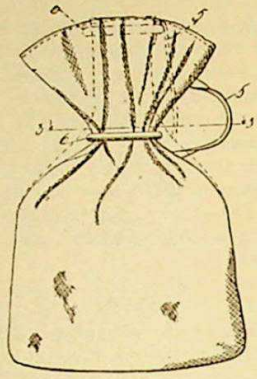
4. A button feeding mechanism comprising a chute having a slot for receiving the shanks of buttons, a pick-up device having a channel adapted to aline with the slot of the chute, a hopper in which the pick-up device is mounted, means for actuating the pick-up device to cause the shanks of buttons in the hopper to engage in the channel of the pick-up device, said hopper having an outlet for permitting buttons to flow down the chute, a swinging finger movable back and forth in the upper part of the slot of the chute to prevent clogging of the outlet of the hopper, a spring actuated arm for moving the finger in one direction, and an arm connected with the pick-up device and having a wiping engagement with the first-mentioned arm for moving the finger in the opposite direction.

5. A button feeding mechanism comprising a hopper, a chute leading therefrom and having a slot, a plate movable vertically in the hopper from the bottom to the top thereof, and vice versa, the top edge of the plate being grooved to receive the shanks of buttons and carrying the latter upwardly toward the top of the hopper, whereby buttons slide into the chute, a device movable upwardly into the path of the buttons and downwardly therefrom at the upper portion of the chute for preventing clogging of the buttons, and a deflector disposed over the chute for preventing buttons discharged from the plate from being supported one on top of another.

[Claims 6 and 7 not printed in the Gazette.]

1,204,068. CASH-PURSE OR TOBACCO-BAG. BENJAMIN ROBIN AND JOHN CAPLIN, Washington, D. C. Filed Jan. 8, 1916. Serial No. 71,018. (Cl. 150—3.)

1. A device of the class described comprising a purse or bag having an open upper end, a loop permanently secured to said purse or bag adjacent its upper end, a ring carried upon said loop, said ring being adapted to be moved upwardly upon said loop for urging the loop upwardly at its upper portion to a point adjacent the top of the purse or bag, said purse or bag being adapted to be folded upon itself at its upper end to assume a compact position, at which time the ring may be swung over the upper end and then slid downwardly upon the folded upper end for a considerable distance therebelow to a point adjacent the lower portion of said loop whereby the folded upper end of the purse or bag will spring slightly toward an open position above said ring so as to positively anchor the ring in a set position, whereby the entrance to the bag will be positively held in a closed position.



2. A device of the class described comprising a purse or bag having an open upper end, a yieldable loop having its ends inserted into and being secured to said purse or bag, whereby said loop will be positively retained in a set position upon the side portion of said purse or bag, a ring slidably mounted along said loop, the upper entrance portion of said bag being adapted to be folded upon itself to assume a compact position, at which time said ring may slide along said loop to the upper portion thereof and then urge the yieldable loop upwardly for a distance, whereby the loop will extend to a point adjacent the extreme upper end of said purse or bag, at which time said ring may be swung over the extreme top of the folded entrance and then slid downwardly over the folded entrance at which time the folded entrance will spring slightly open above said ring, whereby said ring will be anchored in a set position at a distance below the upper end of the purse or bag so as to positively close the entrance into the interior of the purse or bag.

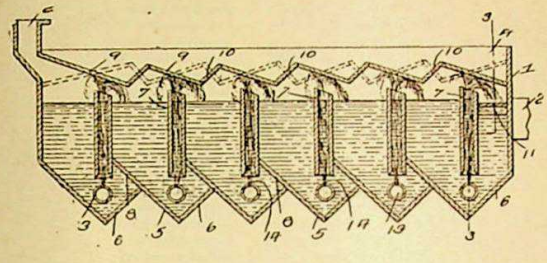
3. A device of the class described comprising a purse or bag having an open upper end, a loop secured to said purse or bag, a yieldable ring slidably mounted upon said loop, said purse or bag being adapted to be folded upon itself at its upper end to assume a compact position, at which time said yieldable ring may be slid along said loop so as to urge the loop upwardly at its upper portion to a point adjacent the extreme upper end of said purse or bag, at which time the ring may be swung over the folded upper end of the purse or bag, said ring being capable of yielding slightly to conform in contour to the shape of the folded upper end of the purse or bag, at which time the ring may slide downwardly over the folds of the purse or bag for a distance below the upper end thereof, at which time the folds will spring slightly open, whereby the ring will be held in a set position upon the purse or bag for holding the entrance thereof in a closed position.

4. A device of the class described comprising a purse or bag having an open upper end, a yieldable loop carried by said purse or bag, an elastic ring carried upon said loop, said purse or bag being adapted to be folded upon itself at its upper portion so as to assume a very compact position, at which time the elastic ring may be moved or slid along the loop so as to urge the loop upwardly at its upper portions to a point adjacent the extreme top of said purse or bag, at which time the ring may be stretched slightly and swung toward the top of the folded end of said purse or bag, after which the ring may be slid downwardly over the folds which in turn will spring slightly so as to cause the elastic ring to bind upon said purse or bag at a distance from the upper end thereof, whereby the entrance to the purse or bag may be positively closed.

1,204,069. AGITATOR FOR ORE TREATMENT. CYRUS ROBINSON, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation, a Corporation of New York. Filed Oct. 1, 1910, Serial No. 584,868. Renewed Mar. 30, 1916. Serial No. 87,850. (Cl. 23—31.)

1. In a device of the class described, the combination of a receptacle, a baffle plate, means for projecting sep-

arated minute sub-masses of a mixture of ore and solvent solution from the receptacle violently against the said plate, and a second receptacle for receiving the mixture deflected from the said plate, substantially as set forth.



2. In a device of the character described, the combination of a series of receptacles for a mixture of ore and solvent solution, a series of baffle plates and means for forcing a part of the mixture from one receptacle against the baffle plate, from which a portion of it is deflected into the next adjacent receptacle, substantially as set forth.

3. In a device of the class described, the combination of a series of adjacent receptacles for a mixture of ore and solvent solution, a series of baffle plates, means for introducing fluid under pressure into each of the receptacles to force a portion of the mixture against one of the baffle plates in a direction such that a part of it is deflected into the next adjacent receptacle, substantially as described.

4. In a device of the class set forth, the combination of a series of receptacles, for a mixture of ore and solvent solution, a series of tubes each communicating at its lower end with one of the receptacles, a series of baffle plates each in alinement with the upper end of one of the tubes, and means for forcing the mixture through the tubes against the baffle plates, whereby a portion of the mixture from each receptacle is deflected into the next adjacent receptacle, substantially as set forth.

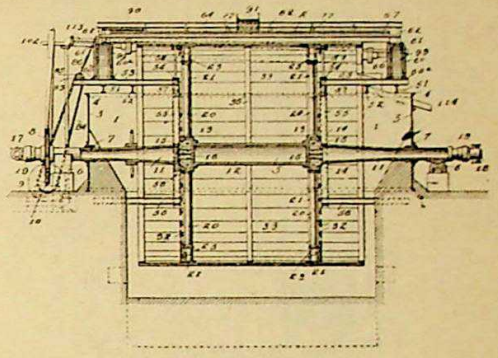
5. In a device of the class described, the combination of a series of receptacles for a mixture of ore and solvent solution, a series of transversely elongated vertically extending tubes each communicating at its lower end with the mixture in one of the receptacles, a series of inclined baffle plates each in alinement with the upper end of one of the tubes, a series of transverse pipes one in each receptacle in alinement with the lower end of the corresponding tube, each of the said pipes being provided with a series of holes extending toward the corresponding tube, and means for supplying gas under pressure to the said pipes, whereby jets of gas issue through the said holes and carry portions of the mixture upward through the said tubes against the baffle plates from which parts of it are deflected into the next adjacent receptacles, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,204,070. DEHYDRATER. CYRUS ROBINSON, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation, a Corporation of New York. Filed Aug. 16, 1912. Serial No. 715,516. (Cl. 210—14.)

1. In a dehydrating and washing mechanism for treating ore, the combination of a tank for wash liquid, an endless filtering medium moving through a path a portion of which is in the tank and a portion of which is outside of the tank and substantially horizontal, a pulp holder for sustaining a supply of ore pulp immediately over the horizontal part of said path, means positively engaging with the pulp in said holder for moving it transversely across and distributing it uniformly over said part of said path and means for removing the pulp adhering to the filtering medium after it emerges from the tank.

2. In a dehydrating and washing mechanism, the combination of a tank for a wash liquid, a rotatable filtering drum mounted to rotate while partially submerged in said tank, means above the upper part of said drum for supplying pulp fluid thereto, means engaging with the pulp immediately before it is delivered to the drum and positively moving it transversely thereof to uniformly distribute it, and means adjacent to and relatively behind the ore supplying devices for removing from the surface of the drum the material adhering thereto after it emerges from the tank.



3. In a dehydrating and washing mechanism for treating ores, the combination of a tank for wash liquid, a filtering drum arranged to rotate while partially submerged in the tank, a receptacle for holding ore pulp immediately above the drum and having devices for feeding the pulp across the surface of the filter, means for adjusting the feeding devices to change the rate of feeding, means positively engaging with the pulp to distribute it uniformly across the drum, and a cleaning device for removing material from the surface of the filter after it has emerged from the wash tank.

4. In a dehydrating and washing mechanism for treating ore, the combination of a tank for wash liquid, a filtering drum arranged to rotate while partially submerged in the tank, a horizontal feed trough above the filtering drum and extending across its upper surface, means for supplying ore pulp to said trough, means engaging with the said pulp while in said trough and reciprocating transversely to the path of the drum for positively feeding the pulp to the drum, manually controllable means for adjusting the feeding device to change the rate of feeding, and a device for removing material from the surface of the drum after it emerges from the tank.

5. In a dehydrating and washing mechanism for treating ore, the combination of a tank for wash liquid, a filtering drum arranged to rotate while partially submerged in the tank, a horizontal feed trough above and extending across the drum and having a narrow longitudinal slot in its bottom, means for supplying ore pulp to the trough, a toothed saw-like feeding device movably mounted in the said slot, and power devices for moving the feeding device vertically and horizontally to force material outward from the trough to the filtering medium.

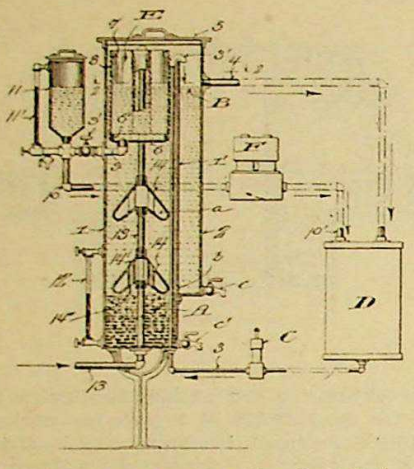
[Claims 6 to 23 not printed in the Gazette.]

1,204,071. FILTER. AUGUST ROSENTHAL, West Allis, Wis. Filed July 17, 1915. Serial No. 40,482. (Cl. 210—10.)

1. A liquid filter of the character described comprising a tank having a filling compartment in communication with the lower portion of said tank, the filling compartment being provided with an overflow to maintain a predetermined level of liquid within the tank, a feed pipe in communication with the upper portion of said filling compartment, filter means mounted within the upper portion of the tank, a delivery pipe in communication with the filter means, and a heating element extending into the tank comprising a radiator pipe having a series of hollow baffle plates connected therewith.

2. A liquid filter of the character described comprising a tank having a filling compartment in communication with the lower portion of said tank, the filling compartment being provided with an overflow to maintain a predetermined level of liquid within the tank, a feed pipe in communication with the upper portion of said filling compartment, filter means mounted within the upper portion

of the tank, a delivery pipe in communication with the filter means, and a heating element for the tank comprising a pipe and one of more baffle-plates mounted in the tank between the lower portion thereof and the filter means.



3. A liquid filter of the character described comprising a tank having a filling compartment in communication with the lower portion of said tank, the filling compartment being provided with an overflow to maintain a predetermined level of liquid within the tank, a feed pipe in communication with the upper portion of said filling compartment, filter means mounted within the upper portion of the tank, a delivery pipe in communication with the filter means, a heating element for the tank, and baffle plates mounted in the tank between the filter means and lower portion thereof.

4. A liquid filter comprising a tank, a filling compartment in communication with the lower portion of the tank, the filling compartment being provided with an overflow to maintain a predetermined level of liquid within the tank, a feed pipe extending through the body of the tank and in communication with the upper portion of the filling compartment, a heating element mounted within the tank, a hollow filter positioned in the upper portion of the tank, and means for drawing liquid from the interior of said filter.

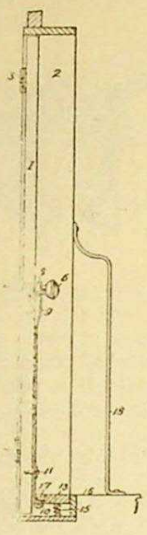
5. A liquid filter comprising a tank, a filling compartment in communication with the lower portion of the tank, a filter chamber in the upper portion of the tank, a priming cup disposed in horizontal alinement with the filter chamber, a pipe connecting the priming cup and the filter chamber and a delivery pipe extending from the cup.

[Claims 6 to 9 not printed in the Gazette.]

1,204,072. DOOR-OPENING DEVICE. NATHAN ROYACK, Brooklyn, N. Y. Filed Oct. 10, 1914. Serial No. 866,123. Cl. 70—120.)

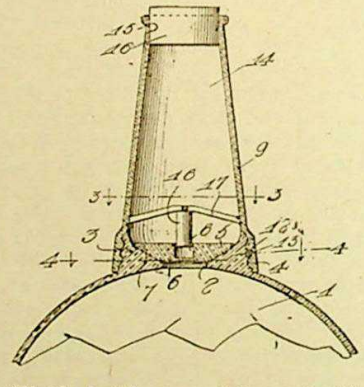
1. In combination, a door-frame, a door mounted in said frame, a spring-projected latch mounted on the door and arranged for locking engagement with the frame, a rod vertically movable on the door and connected at its upper end to said latch for the release thereof, a roller mounted at the lower end of said vertically-movable rod, a foot plate yieldingly supported for vertical movement in the floor adjacent said door and normally held in upper position and adapted to be depressed by the action of the foot, and a pin fixed to said foot plate and adapted when the door is closed to engage said roller and downwardly urge said rod for the release of said latch.

2. In combination, a door frame, a door mounted in said frame, a spring-projected latch mounted on the door and arranged for locking engagement with the frame, means normally acting to automatically open said door when the latter is unlatched, a rod vertically movable on the door and connected at its upper end to said latch for the release thereof, a roller mounted at the lower end of said vertically-movable rod, a foot plate yieldingly supported for vertical movement in the floor adjacent said door and normally held in upper position and adapted to be depressed by the action of the foot, and a pin fixed to



said foot plate and adapted when the door is closed to engage said roller and downwardly urge said rod for the release of said latch.

1,204,073. NON-REFILLABLE BOTTLE. THEODORE SANDGEROTH, Anoka, Nebr. Filed Oct. 26, 1914. Serial No. 868,750. (Cl. 215—103.)

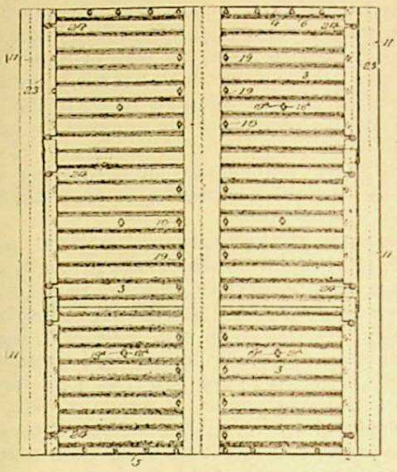


A non-refillable bottle comprising a bottle body, an exteriorly threaded collar integral with the body, the upper surface of the collar serving as a valve seat, a valve disposed on the seat and provided with a central recess, a neck having an enlarged end integrally threaded for engagement with the collar and arranged so that the inner surface of the neck is in alinement with the upper edge of the collar, a valve guard integral with the neck including cross arms extending downwardly from the point of intersection, and an elongated pin depending from the intersection of the arms and engageable with the recess in the valve to guide and limit the movement of the valve to prevent the valve from striking and breaking the arms.

1,204,074. FIRE DOOR OR SHUTTER. FELIX L. SAINO, Memphis, Tenn. Filed June 8, 1915. Serial No. 32,948. (Cl. 189—46.)

1. In a fire door or shutter, the combination of a supporting structure, a wall constructed of corrugated sheet metal sections provided with slots, said sections constructed each with a folded edge providing a groove and a straight edge forming a tongue, said tongues of the sections fitting within the grooves of their respective adjacent sections and forming slip joints therewith, members passing through said slots and the supporting structure and securing the sections to said structure, and fusible

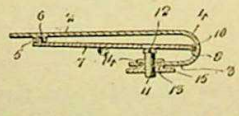
washers on said members operable to release the same and allow the separate sections of said wall to expand independently, substantially as set forth.



2. In a fire door or shutter, the combination of a front and a rear wall constructed of corrugated sheet metal sections having registering slots, said sections constructed each with a folded edge providing a groove and a straight edge forming a tongue, said tongues of the sections fitting within the grooves of their respective adjacent sections and forming joints therewith having clearances for relative movement of the joint members, members passing through said registering slots and securing said walls together, and fusible washers on said members operable to release the same and allow the separate sections of said walls to expand independently, substantially as set forth.

3. In a fire door or shutter, the combination of hingedly mounted parts each constructed of a front and a rear wall comprising sheet metal sections having registering slots and formed each with a folded edge providing a groove and a straight edge providing a tongue, said tongues of the sections fitting within the grooves of their respective adjacent sections and forming joints therewith having clearances for relative movement of the joint members, said sections constructed with boxings at the respective adjacent edges of the door parts and said boxings forming opposed flanges to provide a lapped joint between said parts, members passing through the registering slots of the sections and securing the walls together, and fusible washers on said members operable to release the same and allow said walls to expand, substantially as set forth.

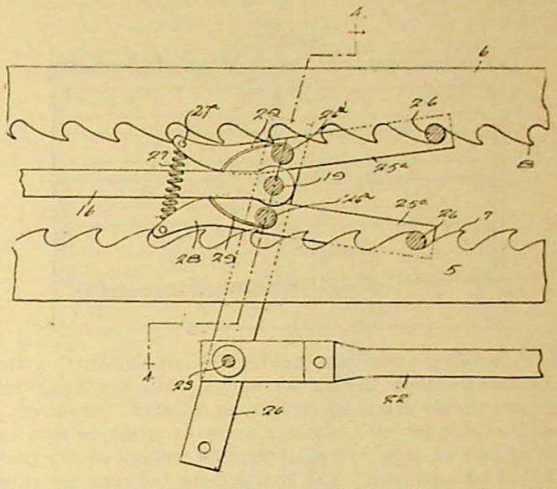
1,204,075. TIE-CLASP. JOSEPH E. SARPHIE, Hattiesburg, Miss. Filed June 4, 1913. Serial No. 771,704. (Cl. 24—243.)



A clasp comprising a substantially U-shaped frame having limbs of different lengths, a jaw formed from a rectangular strip having one end hingedly connected to the curved portion of said frame and its other end formed with a row of teeth each extending toward the inner surface of the long limb of the frame, a nut rotatably mounted in and held against movement away from said short limb, and a headed screw mounted in said nut with its head portion abutting said jaw intermediate its ends, said nut operating said screw which in turn acts upon said jaw.

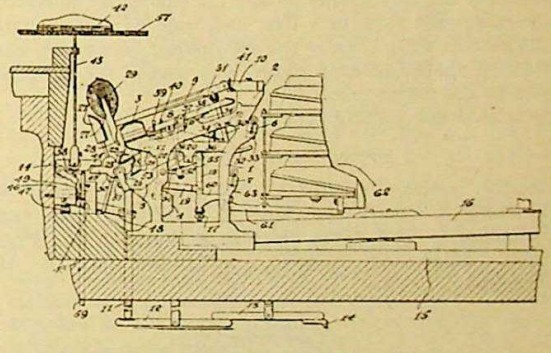
1,204,076. WIRE-STRETCHER. WILLIAM SCHMOEGER, Russellville, Mo. Filed Dec. 31, 1915. Serial No. 69,585. (Cl. 254—72.)

A wire stretcher including a pair of ratchet bars having ratchet teeth formed upon the adjacent longitudinal edges thereof, a pair of lever sections arranged upon opposite sides of said ratchet bars, pins connecting the said lever sections and arranged between said rack bars, pawls



pivotally secured to said pins, and curved guard members pivotally secured to said pins adapted to prevent engagement of said pins with the teeth of said ratchet bars.

1,204,077. PIANISSIMO DEVICE FOR GRAND-PIANO ACTIONS. WILLIAM A. SCHROEDER, Everett, Wash. Filed Apr. 15, 1914. Serial No. 831,975. (Cl. 84—61.)



1. A grand piano action comprising a frame, arms pivoted upon said frame, a hammer rest rail carried by the swinging ends of said arms, a lost motion device, a bar engaging said lost motion device, links suspended from said arms and secured at their lower ends to said bar, and means for raising said hammer rest rail to thereby raise said lost motion device.

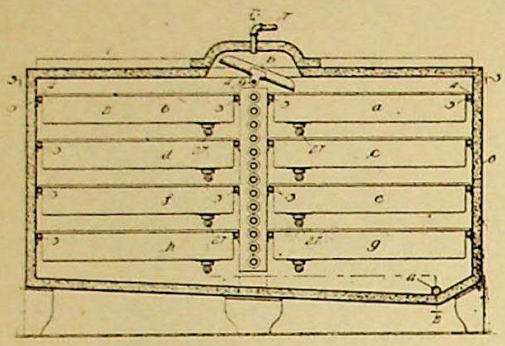
2. A grand piano action comprising a frame, arms pivoted upon said frame, a hammer rest rail carried by the swinging ends of said arms, a lost-motion device, a bar engaging said lost-motion device, links secured upon and adjustable axially of said arms, and supporting said bar at their lower ends, and means for raising said hammer rest rail to thereby raise said lost motion device.

1,204,078. HOLDING APPARATUS. CHARLES SKIDD, Kenosha, Wis. Filed Mar. 11, 1916. Serial No. 83,481. (Cl. 137—21.)

1. A holding apparatus having, in combination, a tier of containers each having an outlet, a separate valve for each outlet, a series of devices each for opening one of said valves, a device for supplying liquid to the uppermost container, a vertical rotary shaft, a cam on said shaft arranged to operate the supplying device, and other cams on said shaft arranged to operate the valve-opening devices.

2. A holding apparatus having, in combination, a series of containers each having an outlet, a separate valve for each outlet, a series of plungers each for opening one of

said valves, a rotary shaft, cams on said shaft, and levers pivoted at their free ends to said plungers and arranged to be swung by said cams.



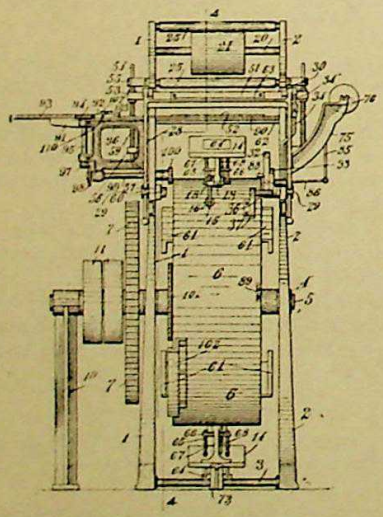
3. A holding apparatus having, in combination, a tier of containers each having an outlet, each container but one successively discharging into an adjacent container, a separate valve for each outlet, a series of members each for opening one of said valves, a vertical rotary shaft, cams mounted on said shaft, and connections between the cams and said devices for actuating the latter.

4. A holding apparatus having, in combination, two tiers of containers, each container having an outlet arranged to discharge liquid to the next lower container, a separate valve for each outlet, a device arranged to distribute liquid to the uppermost containers of the two tiers alternately, and means for operating the distributing device and the valves in proper sequence.

5. A holding apparatus having, in combination, a casing, a plurality of pans, means within the casing for removably supporting said pans in a tier, each pan having an outlet in its bottom wall, a valve for each outlet, means for automatically operating each valve, and means for supplying liquid to the upper pan.

[Claim 6 not printed in the Gazette.]

1,204,079. BOX TOPPING AND TAPING MACHINE. FORREST C. SIMON and JOHN F. O'BRIEN, Piqua, Ohio, assignors to The Piqua Machine and Boiler Co., Piqua, Ohio. Filed Nov. 1, 1915. Serial No. 58,979. (Cl. 93—54.)



1. In a machine of the character specified, a rotatable member carrying a series of pivotally supported box forms, means for applying tape to the boxes supported on said forms, and means for applying paper to said boxes over the tape and comprising paper feeding devices, and means for applying an adhesive to the surface of said paper in advance of its application to the boxes.

2. In a machine of the character specified, a rotary member, a series of frames pivoted thereto and supporting a series of box forms, paper unwinding devices, an adhesive-supplying roller over which said paper is conducted by said unwinding devices, and means for cutting said paper into definite lengths during its application to the boxes.

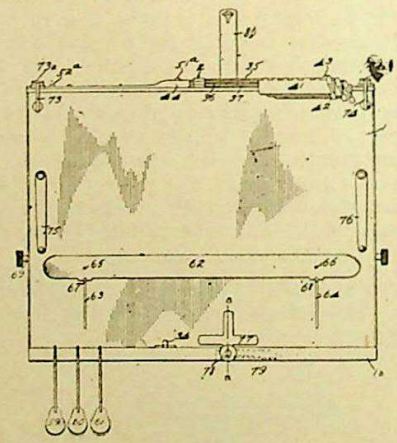
3. In a machine of the type specified, a rotatable member carrying pivotal box forms, gripping means comprising angular levers adapted to engage a web of paper and apply it to said boxes as the same are advanced, means carried on said rotatable member adapted to open and close said gripping means, a pressure roller adapted to engage said paper as the boxes are carried forward and to apply the same to said boxes, and means for dislodging said boxes from said forms at the completion of each application of paper.

4. In a machine of the character specified, a rotatable member carrying box forms which are pivotally supported thereon, paper feeding devices adapted to apply paper to said boxes, means for operating said paper feeding devices including cams mounted upon said form-carrying member, means for cutting said paper in required lengths for each box, means for dislodging each box from said forms at the completion of each application of paper thereto, said box-dislodging means including spring-controlled members, and means for holding said box dislodging means and for releasing the same to permit of the dislodgment of the boxes.

5. In a machine of the character specified, a rotatable member carrying a series of box forms, tape-applying means including grippers to fit the tape and means for cutting each length of tape, means for applying paper to the boxes over said tape and including arms and grippers supported on said arms, means carried by said rotatable member for actuating said arms and said grippers to grip the paper and to feed it forward, and kickers adapted to remove each box from its supporting form at the completion of each paper-applying operation.

[Claims 6 to 16 not printed in the Gazette.]

1,204,080. MUSIC-LEAF TURNER. STEPHEN SLATER, Middletown, N. Y. Filed July 7, 1915. Serial No. 38,437. (Cl. 84—135.)

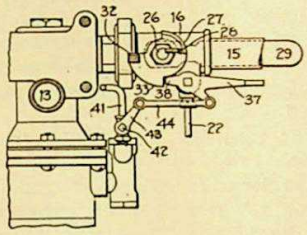


1. In a device of the character described, a supporting frame, a vertical shaft mounted thereon, shafts telescoping said vertical shaft, radially extending arms fixedly attached to said vertical shaft and said telescoping shafts at their upper ends, pinions attached to the lower end of said vertical shaft and telescoping shafts, racks transverse of said pinions and meshing with said pinions, actuating springs mounted on said frame and engaging said racks, said springs being adapted to rotate said vertical shaft and telescoping shafts clockwise, means for manually rotating said vertical shaft and telescoping shafts counter clockwise, means for holding said vertical shaft and telescoping shafts from clockwise movement against the tension of said actuating springs, levers for alternately and collectively releasing the means for holding said vertical and telescoping shafts against rotary clockwise movement, substantially as described.

2. In a music leaf turner, a supporting frame, concentric shafts mounted on said frame, rotatable arms mounted

on the upper ends of said shafts, pinions mounted on the lower ends of said shafts, racks mounted on said frame transversely of said pinions and meshing with said pinions, actuating springs engaging said racks, a vertical lever pivotally mounted on said frame near its center, the upper end of said vertical lever engaging one of said racks, and a horizontal lever pivoted to said frame near its center, one end of said horizontal lever engaging the lower end of said vertical lever, the horizontal movement of the free end of said horizontal lever, by connecting mechanism, designed to rotate said shafts in one direction against the tension of said actuating springs, substantially as described.

1,204,081. SAFETY APPLIANCE FOR GAS APPARATUS. JOSEPH M. STABEL, Rochester, N. Y., assignor to Domestic Appliances Company, Rochester, N. Y., a Corporation of New York. Original application filed May 19, 1913, Serial No. 768,683. Divided and this application filed July 27, 1914. Serial No. 853,448. (Cl. 126—42.)



1. The combination with a gas-burner and a casing inclosing the burner, the latter being provided with an opening and with a closure therefor, of a manually-operable valve for controlling the flow of gas to the burner adapted to be operated independently of said closure, and locking means for locking said valve in closed position adapted to be held out of engagement with said valve by said closure when the latter is in its closed position and to lock said valve in closed position when released by the opening of the closure.

2. In combination with a gas-burner, a manually-operable valve for controlling the flow of gas to the burner, and a casing inclosing the burner and provided with an opening and with a closure therefor; a locking-member connected with the valve; and a detent tending to move into engagement with said locking-member to lock the valve in closed position; the detent having a part which is engaged by said closure when the latter is in closed position, whereby the detent is normally held in inoperative position.

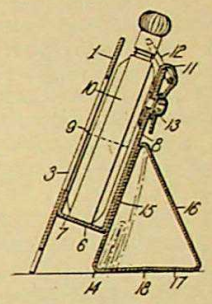
3. The combination with a gas-burner and a casing inclosing the burner, the latter being provided with an opening and with a closure therefor, of a manually-operable valve for controlling the flow of gas to the burner adapted to be operated independently of said closure and provided with means adapted when said valve is open to engage said closure in its closed position and to lock it in that position.

4. The combination with a gas-burner and a casing inclosing the burner, the latter being provided with an opening and with a closure therefor, of a manually-operable valve for controlling the flow of gas to the burner adapted to be operated independently of said closure and provided with means adapted when said valve is open to engage said closure in its closed position and to lock it in that position, and means for locking said valve in its closed position adapted to be held out of engagement with said valve by said closure when the latter is in its closed position and to lock said valve in closed position when released by the opening of said closure.

5. In combination with a gas-burner, a manually-operable valve for controlling the flow of gas to the burner, a pilot-light associated with the burner, a manually-operable valve for controlling the flow of gas to the pilot-light, and a casing inclosing the burner and the pilot-light and provided with an opening affording access to the pilot-light and with a closure for said opening; means cooperating with and controlled by said closure for locking closed the valve controlling the supply of gas to the burner while the closure is open; and means coöperating with both of said valves for locking in open position the valve for controlling the supply of gas to the pilot-light, while the valve for controlling the supply of gas to the burner is in open position.

[Claims 6 to 8 not printed in the Gazette.]

1,204,082. WATCHCASE. ABRAHAM S. STARK, New York, N. Y. Filed Mar. 3, 1916. Serial No. 81,859. (Cl. 224—4.)



1. In a watch case of the character described, a front member having an opening therein, a socket member arranged in back of said front member so as to hold a watch in such position that the face may be seen through said opening, and a strap adapted to engage the watch and said back member for holding the watch against accidental movement.

2. In a watch case of the character described, a front having an opening therein, a socket member arranged at the back of said front member for supporting a watch so that the face may be seen through said opening, a strap secured to said back and adapted to extend through the ring of said watch, and means for securing the free end of said strap to said socket member whereby the watch is locked in position.

3. In a watch case of the character described, a front member having an opening therein, a socket arranged at the rear of said front member for supporting a watch in such position that the face may be seen through said opening, and means connected with said socket member and adapted to engage the ring of the watch for preventing accidental movement of the watch.

4. In a watch case of the character described, a front member having an opening, a socket member arranged in back of said opening for holding a watch in position opposite the opening, means for holding the watch against rotation when in the socket, and an easel structure connected with the socket member for supporting the socket member and the front member, said easel structure comprising a bracing member and a foldable connecting link structure for holding the bracing member in position when the device is in use.

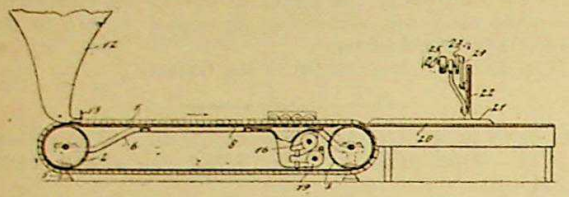
5. In a watch case of the character described, a front formed with an opening, a socket member arranged in back of said opening for holding a watch opposite said opening, a strap connected with said front provided with an aperture therein whereby the strap may be folded over the stem of the watch, said stem extending through said aperture, and means for locking the strap to the socket member.

1,204,083. APPARATUS FOR MANUFACTURING CEMENT BOARDS. ALDEN B. STARR, New York, N. Y. Filed Jan. 25, 1915. Serial No. 4,118. (Cl. 25—1.)

1. In a machine for manufacturing boards of cementitious material, an endless carrier constituting a mold, means for supporting said carrier with its face sloping transversely, means for feeding a liquid mass of the material to said mold, and means for displacing the liquid from said mass while in said mold.

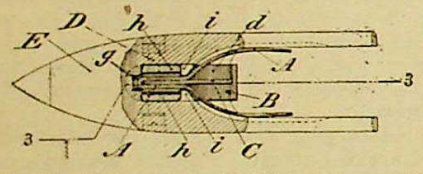
2. In a machine for manufacturing boards of cementitious material, an endless carrier constituting a mold, means

for supporting said carrier with its face sloping transversely, means for feeding a liquid mass of the material to said mold, and means for applying suction to said layer to withdraw the liquid from the mass.



3. In a machine for manufacturing boards of cementitious material, a perforated endless belt having side flanges constituting a mold, a supporting table for the upper half of said belt and an adjustable support for said table and belt for tilting said parts transversely of their length, means for feeding a constant stream of liquid material to said belt to form a layer thereon, and means for displacing the liquid content from said layer while said layer is in motion.

1,204,084. SHUTTLE FOR WEFT-REPLENISHING LOOMS. EDWARD S. STIMPSON, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Oct. 12, 1915. Serial No. 55,383. (Cl. 139—27.)



1. A shuttle for weft replenishing looms having, in combination, a bent weft carrier holding spring; a spreader fitting between the legs of said spring; and a weft carrier directing guide, said guide having upper and lower plates united by the directing incline, said top and bottom plates extending respectively above and below the spring and spreader, the upper plate being bent at its sides downwardly along the sides of the spring shank and thence extending laterally to form flanges adapted to fit within grooves in the shuttle, and the end of the top plate being bent downwardly back of the curved inner end of the spring, whereby said spring, spreader and guide are united together prior to insertion in the shuttle, and said spreader having a bolt receiving hole adapted to register with the bolt receiving holes in the shank of the spring and said spreader further having an inclined end adapted to fit the inner face of the directing incline of the guide.

2. A shuttle for weft replenishing looms having, in combination, a bent weft carrier holding spring; a spreader fitting between the legs of said spring; and a weft carrier directing guide, said guide having upper and lower plates united by the directing incline, said top and bottom plates extending respectively above and below the spring and spreader, the upper plate being bent at its sides downwardly along the sides of the spring shank and thence outwardly to constitute flanges fitting grooves in the shuttle, and the end of the top plate being bent downwardly back of the inner end of the spring, whereby said spring, spreader and guide are united together prior to insertion in the shuttle, and said spreader having a bolt receiving hole adapted to register with the bolt receiving holes in the shank of the spring and said spreader fitting within the spring and guide so as to be maintained in position with its bolt receiving hole registering with the bolt holes of the spring.

3. A shuttle for weft replenishing looms having, in combination, a bent weft carrier holding spring; a spreader fitting between the legs of said spring; and a bent metal retainer folded around said spring and spreader so as to lock the same together, the top plate of said retainer being bent downwardly outside of the shank of the spring, and outwardly to constitute flanges to fit grooves in the shuttle.

4. A shuttle for weft replenishing looms having, in combination, weft carrier holding spring jaws; and a bent metal retainer having top and bottom plates above and below the shanks of said jaws, one of said plates being bent so as to embrace the sides of the shanks of the jaws and thence outwardly to constitute side flanges to fit grooves in the shuttle, and the edges of the other plate likewise fitting grooves in the shuttle.

1,204,085. MANUFACTURE OF TILES, ROOF-SHEETS, AND THE LIKE. EDGAR ROUSE SUTCLIFFE, Leigh, England. Filed Oct. 2, 1914. Serial No. 864,688. (Cl. 18—47.5.)

1. A method of manufacture of tiles, roof sheets and the like from fine sand and lime, consisting in mixing the fine sand and lime together and producing a liquid slip, incorporating asbestos fiber with the said liquid slip, compressing the liquid mixture within a mold for removing the main part of the water it contains, said mold being provided with filter cloths, removing the sheets or slabs thus produced, compressing the sheets or slabs between the filter cloths for further reducing their content of water, and then indurating the slabs or sheets by their subjection to the action of steam and compression mechanically applied.

2. A method of manufacture of tiles, roof sheets and the like from fine sand and lime, consisting in mixing the fine sand and lime together and producing a liquid slip, incorporating asbestos fiber with the said liquid slip, compressing the liquid mixture within a mold for removing the main part of the water it contains, said mold being provided with filter cloths, removing the sheets or slabs thus produced, compressing the sheets or slabs between the filter cloths for further reducing their content of water, removing the filter cloths, and then indurating the slabs or sheets by their subjection to the action of steam and compression mechanically applied.

3. A method of manufacture of tiles, roof sheets and the like from fine sand and lime, consisting in mixing the fine sand and lime together and producing a liquid slip, incorporating asbestos fiber with the said liquid slip, compressing the liquid mixture within a mold for removing the main part of the water it contains, said mold being provided with filter cloths, removing the sheets or slabs thus produced, compressing the sheets or slabs between the filter cloths for further reducing their content of water, removing the filter cloths, interposing metal sheets between the respective slabs, and indurating the said slabs by subjecting them to the action of steam and to compression mechanically applied.

4. A method of manufacture of tiles, roof sheets and the like from fine sand and lime, consisting in mixing the fine sand and lime together and producing a liquid slip, incorporating asbestos fiber with the said liquid slip, compressing the liquid mixture within a mold upon filter cloths for removing the main part of the water it contains, said mold being provided with filter cloths, removing the sheets or slabs thus produced, compressing the sheets or slabs between the filter cloths for further reducing their content of water, and then indurating the slabs or sheets by their subjection to the action of steam and compression mechanically applied.

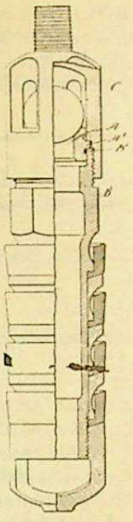
5. A method of manufacture of tiles, roof sheets and the like from fine sand and lime, consisting in mixing the fine sand and lime together and producing a liquid slip, incorporating asbestos fiber with said liquid slip, compressing the liquid mixture within a mold for removing the main part of the water it contains, said mold being provided with filter cloths, removing the sheets or slabs thus produced, compressing the sheets or slabs between the filter cloths for further reducing their content of water, removing the filter cloths and piling the said slabs one upon the other with sheets of iron or other suitable hard material interposed, and then indurating the said slabs by subjecting them to the action of steam and to compression mechanically applied.

[Claim 6 not printed in the Gazette.]

1,204,086. TILES, ROOF-SHEETS, AND THE LIKE. EDGAR ROUSE SUTCLIFFE, Leigh, England. Filed Apr. 4, 1916. Serial No. 88,920. (Cl. 106—24.)

A new article of manufacture being a tile made of lime, fine sand and asbestos deprived of superfluous moisture, indurated and rendered tough.

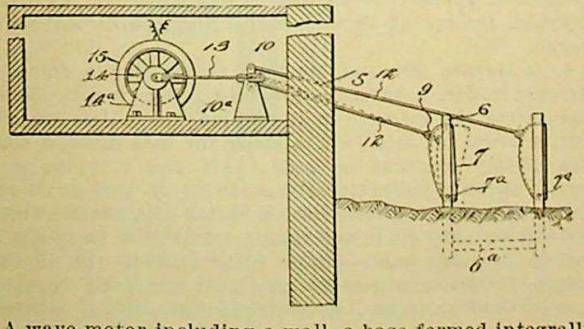
1,204,087. VALVE. ROBERT H. THORNE, Williamsport, Pa., assignor of one-half to J. Lewis Hough, Williamsport, Pa. Filed Dec. 17, 1909, Serial No. 533,526. Renewed Apr. 4, 1916. Serial No. 88,958. (Cl. 103—63.)



1. A valve seat comprising a body having its outer side cylindrical with the surface thereof parallel with the axis of the body and having on said body mid-way between its ends an outwardly projecting annular flange and provided on opposite sides of said flange with continuous annular grooves formed partly in the face of the flange at the junction of the latter and the body and partly in the body, the said grooves extending below the outer cylindrical surface of the body, substantially as set forth.

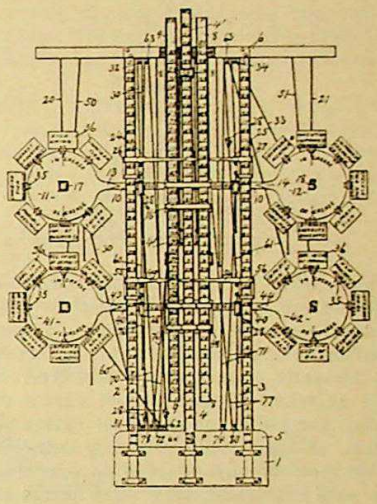
2. A valve seat comprising a body having its outer side cylindrical with the surface thereof parallel with the axis of the body, and having on said body mid-way between its ends an outwardly projecting annular flange and provided on opposite sides of the said flange with continuous annular grooves, said grooves being formed partly in the faces of the flange substantially as set forth.

1,204,088. WAVE-MOTOR. CHARLES H. TOLLEY, Ilion, N. Y. Filed Jan. 11, 1915. Serial No. 1,636. (Cl. 253—11.)



A wave motor including a wall, a base formed integrally with the rear face of the wall, a driven shaft supported on the base, brackets supported upon the base, and located between the wall and the motor, a second shaft journaled in the upper ends of the brackets, said second shaft provided with a plurality of cranks arranged at various angles, a plurality of piles arranged in pairs and located in the front of said wall, bucket members pivotally mounted between said piles, connecting rods extending through said wall and having one end connected to the buckets and their opposite ends connected to the various angled cranks of the second named shaft, means connecting the second named shaft with the motor shaft, said various angles of the cranks holding the buckets at various inclinations so that a rotary movement of the second named shaft is assured.

1,204,089. EDUCATIONAL APPLIANCE. EDSON NEWTON TUCKEY, Syracuse, N. Y. Filed Oct. 1, 1913. Serial No. 792,891. (Cl. 35—12.)



1. In an educational appliance for teaching economics, an upright scale representing quantitative variations, and a holder movable along the scale bar and bearing indicia representing forces which cause such variations.

2. An educational appliance having an upright scale-bar graduated to represent quantitative variations, a transversely extending bar movable along the scale bar, a disk pivoted to said bar and provided with a pointer movable along the scale-bar, and force cards mounted on the disk and bearing indicia representing forces which influence quantitative values.

3. An educational appliance comprising an upright scale-bar having a scale of marginal costs, a separate scale-bar having a scale of prices, said bars being movable relatively to each other, and a pointer movable along the scales of both bars.

4. An educational appliance comprising an upright scale-bar having a scale of quantitative values, a separate upright bar having a scale of marginal costs, and separate pointers movable along their respective scales.

5. An educational appliance having a scale of quantitative values, a pointer movable along said scale, a separate scale of prices, a pointer movable along the price scale, and connections between said pointers for transmitting motion from one to the other.

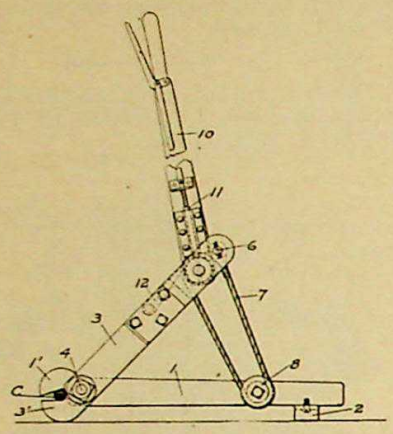
[Claims 6 to 23 not printed in the Gazette.]

1,204,090. POWER-CUTTER. JOHN VOLESKE, Portland, Oreg. Filed Feb. 25, 1915. Serial No. 10,517. (Cl. 164—41.)

1. A power cutter of the character described, comprising a lower cutter member having a cutting jaw and a supporting base piece, an upper cutter member pivotally connected thereto and having a cutter jaw to coöperate with the jaw of the first member, a cable connection between the cutter members for drawing them together, a ratchet-operated winding member on one of said cutter members adapted to wind said cable, and means for operating said ratchet-operated winding member.

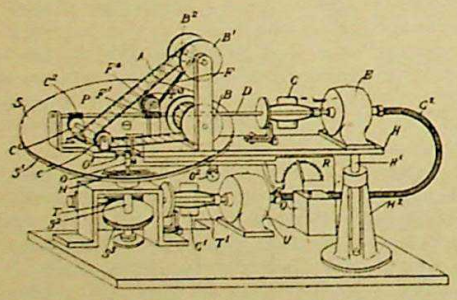
2. A power tool of the character referred to, comprising two members pivoted together intermediate their ends scissor fashion, and provided with cutting jaws at one end, one of said members being provided with a pulley, or sheave, and the other of said members being provided

with a cable drum, an operating cable connecting said members around said sheave, or pulley, and said cable drum, and a ratchet and hand lever mechanism for operating said cable drum, whereby to wind up said cable and to draw said members together.



3. A power cutter of the character described comprising in combination, a cutter member having a cutting jaw, a supporting base and a pulley, a second cutter member having a cutting jaw and a ratchet-operated drum, and pivotally connected to said first cutter member, a cable attached to said second cutter member and passed around the pulley on said first cutter member, and to said drum, and a handle pivotally connected to said second cutter member and adapted to operate said drum, to wind up said cable and draw said cutter members together, substantially as described.

1,204,091. APPARATUS FOR PREPARING COMBINED CINEMATOGRAPHIC AND PHONOGRAPHIC RECORDS. KATHARINA VON MADALER, West Drayton, England, assignor to Projectophone Company Inc., a Corporation of New York. Filed Oct. 14, 1911. Serial No. 654,774. (Cl. 274—3.)



1. Apparatus for copying upon a ribbon a phonographic record from a master record, comprising in combination a wire suitably mounted with relation to said master record, means for heating said wire and means for causing said ribbon to move past said wire with its edge in contact therewith.

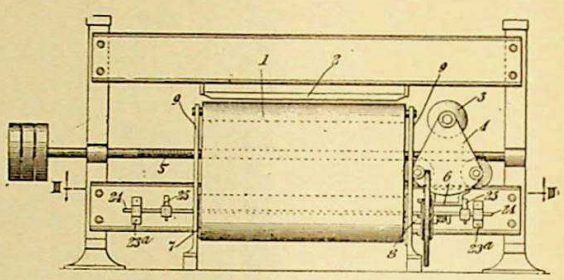
2. Apparatus for copying upon a ribbon, a phonographic record from a master record comprising in combination means for causing appropriate longitudinal travel of said ribbon, a support therefor adapted to permit proper movement of said means to follow the line of undulations in said record, a stylus suitably mounted, a wire so connected with said stylus as to vibrate with it, and means for electrically heating said wire.

3. The combination of means for supporting a ribbon, a sound record, a stylus in contact with the sound grooves in said record, a pivotally mounted wire attached to said stylus, means for heating said wire, means for rotating said record and means for moving said ribbon past said wire with an edge in contact therewith.

4. The combination of a flat phonograph record, a support adapted to swing over and parallel with it, ribbon carrying means mounted on said support, a vibratory wire also on said support and adapted to be vibrated by said phonograph record, means for driving said phonograph record, and means for moving the ribbon past said wire and in contact therewith.

5. The combination of means for supporting a cinematograph film, a sound record, a needle in contact with the sound grooves on said record, a holder for said needle said holder being pivotally mounted, a wire supported by said holder, means for heating said wire, means for rotating said record and means for moving said film past the wire with an edge of the film in contact with said wire.

1,204,092. LEATHER ROLLING AND EMBOSSING MACHINE. CARL VOSS, Newark, N. J., assignor of one-half to Melchior J. C. Walter, Newark, N. J. Filed Jan. 11, 1915. Serial No. 1,560. (Cl. 14—23.)



1. A leather pressing machine comprising an endless transfer belt, a pressing roller, a carriage for said roller, means for moving said roller carriage back and forth across the transfer belt, means for moving the transfer belt, means for intermittently connecting the transfer belt moving means to said belt and disconnecting it therefrom, and means operated by the pressing roller carriage at the end of its movement in either direction to intermittently connect the transfer belt moving means to said belt and to disconnect it therefrom, the time interval between the connection and disconnection of said mechanism permitting the movement of the transfer belt a predetermined distance.

2. A leather pressing machine comprising a frame, a pressing roller, a carriage for said roller, means for reciprocating the carriage in the frame, an endless transfer belt, driving means for said transfer belt, a clutch to connect the transfer belt to the driving mechanism, and means operated by the pressing roller carriage when it approaches the end of its movement in either direction for automatically releasing and then locking the clutch.

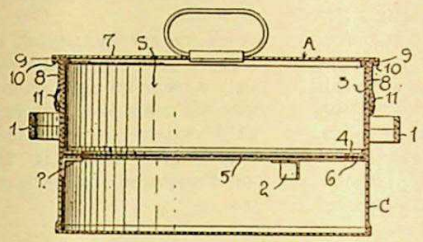
3. A leather pressing machine comprising a frame, a pressing roller, a carriage for said roller, means for reciprocating the carriage in the frame, an endless transfer belt, a driving pulley for said belt, means for operatively connecting and disconnecting said driving pulley to the belt and means operated by the pressing roller carriage as it approaches the end of its movement in either direction for operating said connecting and disconnecting means.

4. A leather pressing machine comprising a frame, a pressing roller, a carriage for said roller, means for reciprocating the carriage in the frame, an endless transfer belt, a drum for said belt, a shaft for said drum, a stop-disk rigidly mounted on said shaft and carrying stop-lugs, a driving pulley loosely mounted on said shaft and bearing against the stop-disk, a clutch-disk longitudinally movable on said shaft and adapted to rotate therewith, a spring pressing said clutch disk against the driving pulley, a spring-pressed locking bolt normally engaging one of said stop-lugs, a controller-bar, means whereby the carriage will move the controller-bar as said carriage approaches the end of its movement in either direction, means carried by the controller-bar to withdraw the locking bolt to disengage it from the stop-lug and to then release it and permit it to engage the next stop-lug on the stop-disk.

5. A leather pressing machine comprising a frame, a pressing roller, a carriage for said roller, means for reciprocating the carriage in the frame, an endless trans-

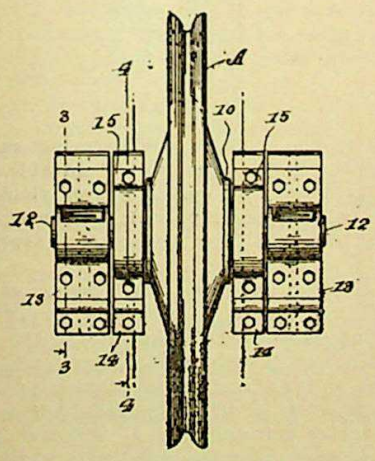
fer belt, a friction driving means for said belt, means for normally holding said friction driving means out of operation, and means operated by the carriage as it approaches the limit of its movement in either direction to release said friction driving means to feed the transfer belt a predetermined distance and to then lock the said driving means before the reversal of movement of the carriage.

1,204,093. CLOSURE FOR RECEPTACLES. JOHN WAGNER, Long Island City, N. Y. Filed Mar. 2, 1916. Serial No. 81,698. (Cl. 220—76.)



The combination with a container, of a closure therefor having a body wall and an annular wall fixed to the outer edge of said body wall and normally inclined inwardly toward the center thereof, the major portion of said annular wall having frictional bearing engagement upon the outer face of the container wall, the free edge of the annular wall being formed with annular portions obtusely inclined with respect to each other and projecting outwardly in converging relation, said annular inclined portions being spaced from the container wall when the closure is applied and resiliently acting to cause an inward bearing pressure of the lower edge of said annular wall upon the wall of the container.

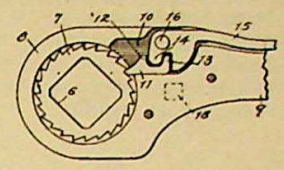
1,204,094. PULLEY OR SHEAVE JOURNAL AND MOUNT. JOHN MADISON WAITS, Eldorado, Ill. Filed Feb. 18, 1916. Serial No. 79,170. (Cl. 64—66.)



1. The combination with a pulley wheel having a hub, of an axle passed through the hub and having different cross sectional diameters, the larger diameter being extended beyond opposite sides of the hub, bearings receiving the smaller diameter of the axle, and auxiliary bearings receiving the larger diameter of the axle beyond opposite ends of the hub.

2. The combination of a pulley wheel having a hub, of an axle passed through the hub and having different cross sectional diameters, the larger diameter being extended beyond opposite sides of the hub, bearings receiving the smaller diameter of the axle, auxiliary bearings receiving the larger diameter of the axle beyond opposite ends of the hub, each of the said bearings being formed in a plurality of separable sections.

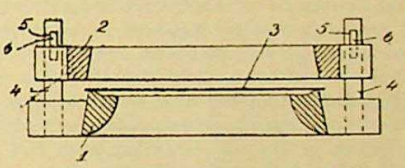
1,204,095. RATCHET-WRENCH. CHARLES J. WALLEN, Cleveland, Ohio. Filed July 10, 1916. Serial No. 108,413. (Cl. 81—60.)



1. The combination with a ratchet wheel, handle, and a sliding pawl carried by the handle and engageable with the wheel, of a lever pivoted on the handle, said pawl having a projection engaged by the lever to advance or retract the pawl.

2. The combination with a ratchet wheel and handle, of a sliding pawl carried by the handle and engageable with the wheel, said pawl having lugs, and an operating lever for the pawl, pivoted to the handle, and having a projection engaging between said lugs to advance or retract the pawl.

1,204,096. METAL SHEET FOR ACOUSTIC PURPOSES AND METHOD OF MAKING SAME. PER ARON WALLER, Stockholm, Sweden, assignor to Carl Richard Waller, Trenton, N. J. Filed Oct. 26, 1912. Serial No. 727,972. (Cl. 148—21.)



1. The herein described method of treating sheet steel to be used for sounding boards and the like, which comprises heating the steel sheet to a temperature such that, when cooled while held against contraction, it is stretched beyond its elastic limit, and then holding along its edges the steel sheet so heated and permitting it to cool, and thereby stretching the steel beyond its elastic limit.

2. The herein described method of treating sheet metal to be used for sounding boards and the like, which comprises heating the metal sheet to a temperature above its critical point of transformation, and then holding along its edges the metal sheet against contraction and permitting it to cool.

3. The herein described method of treating metal to be used for sounding boards and the like, which comprises heating the metal to a temperature above its critical point of transformation, and then clamping the metal between the surfaces of metal bodies having high heat absorption capacity, and permitting the heated metal to cool while so held.

4. The process of treating flat sheets of metal to remove unevennesses therefrom which comprises stretching said sheets longitudinally to beyond the elastic limit of the metal while in a heated condition.

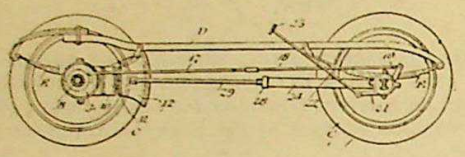
5. The process of treating flat sheets of metal to remove unevennesses therefrom which comprises stretching said sheets both laterally and longitudinally to beyond the elastic limit of the metal while in a heated condition.

[Claims 6 to 21 not printed in the Gazette.]

1,204,097. VEHICLE-BRAKE. RICHARD F. WALTER, New York, N. Y. Filed Sept. 27, 1915. Serial No. 52,933. (Cl. 21—8.)

1. A vehicle brake comprising a brake shoe normally disposed adjacent the periphery of the wheel and comprising a plurality of spaced sections, means for moving the shoe into engagement with the wheel, a serpentine spring interposed between said sections and providing a yieldable connection therebetween to allow the shoe to accommodate itself to the wheel upon its application thereto.

2. A vehicle brake comprising in combination an eccentric loosely mounted upon the rear axle of the vehicle, a brake shoe associated with said eccentric and adapted to be moved thereby into frictional engagement with the wheel, said shoe being thereby adapted to be carried by said wheel into contact with the ground to active position independently of said eccentric, and means for checking the movement of said shoe to active position, and adapted to return said shoe to normal position.

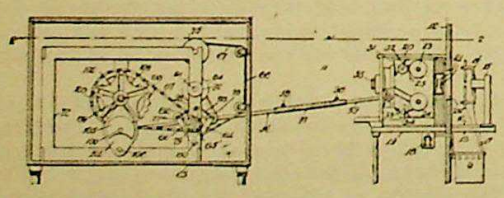


3. A vehicle brake comprising a brake shoe normally disposed adjacent the periphery of the wheel, means for moving said shoe into engagement therewith, including a bell crank lever mounted upon the front axle of the vehicle for rocking movement, an operating rod connected with said shoe and one branch of the bell crank lever, a foot operated rod connected with the other branch of said lever for operating the latter, and means for returning said shoe to normal position.

4. A vehicle brake comprising a brake shoe normally disposed adjacent the periphery of the wheel, means for moving said shoe into engagement therewith, means for checking the movement of said shoe to active position including a casing normally disposed in horizontal position and having one end journaled upon the front axle of the machine, a rod connected with the shoe and slidably fitted within said casing and adapted to move said casing to an inclined position upon movement of the shoe to active position, a spring encircling said rod and arranged within the casing, said spring normally extending throughout the major portion of the length of the casing and adapted to automatically return the shoe and casing to normal position.

5. A vehicle brake comprising a brake shoe normally disposed adjacent the periphery of the wheel and consisting of a plurality of spaced sections, flanges formed on the adjacent ends of said sections and disposed in confronting relation, and a yieldable connection between said flanges to allow the shoe to accommodate itself to the wheel upon its application thereto.

1,204,098. PHOTOGRAPHIC DUPLICATING AND ENLARGING APPARATUS. GEORGE R. WATSON, Portland, Oreg. Filed Nov. 14, 1913. Serial No. 801,088. (Cl. 88—24.)



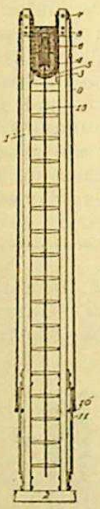
1. In a reproducing apparatus, the combination of a case having an exposure opening, a removable slide covering the latter and having a supplemental exposure opening controlling the area exposed, means for moving a ribbon having a sensitized surface across said exposure opening of the case, and a removable roller over which said ribbon is drawn by said moving means, such roller being provided with means for marking on said ribbon the dividing line between the adjacent exposed areas.

2. In a reproducing apparatus, the combination of a case having an exposure opening, a removable slide covering the latter and having a supplemental exposure opening controlling the area exposed, reels adapted for winding and unwinding a ribbon having a sensitized surface across said exposure opening of the case, a removable spacing roller disposed relatively to said reels, and means between the reels for guiding said ribbon over said spacing roller, the latter being provided with means for marking on said ribbon the dividing line between the adjacent exposed areas.

3. In a reproducing apparatus, the combination of a case having an exposure opening, a removable slide covering the latter and having a supplemental exposure opening controlling the area exposed, reels adapted for winding and unwinding a ribbon having a sensitized surface across said exposure opening of the case, a removable spacing roller disposed relatively to said reels, means between the reels for guiding said ribbon over said spacing roller, the latter being provided with means for marking on said ribbon the dividing line between the adjacent exposed areas, and means for holding said ribbon tautly on said spacing roller.

4. In an apparatus of the character described, the combination of a projecting camera having means for feeding a ribbon of negative film, a reproducing camera having means for feeding a ribbon of sensitized surface across the exposure opening of said camera in position to receive the image projected from the negative film, and disconnectible means for operating the projecting camera from the reproducing camera.

1,204,099. WELL-DRILLING DEVICE. GEORGE R. WATSON, Waterloo, Iowa. Filed Apr. 8, 1916. Serial No. 89,776. (Cl. 255—16.)



1. In combination, a wire tool-carrying cable, and a body over which it is dependingly movable, a support upon which said body is movable, and yieldable cables connected to said support, passed theerover, and linked together, with the said body supported movably at their linked ends.

2. In combination, a wire tool-carrying cable, and a yieldable cable supporting same while permitting unlimited longitudinal movements to and fro of the wire cable.

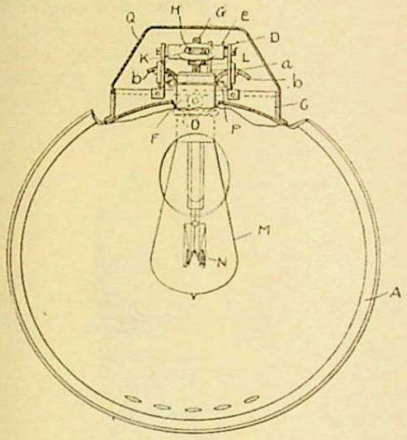
3. In combination, a wire tool-carrying cable, yieldable cable sections, and an unyielding linking connection between adjacent ends of the yieldable cables, the other ends of the latter being anchored, with the linking-connection thereof supporting the wire cable while permitting unlimited longitudinal movements of the wire cable.

4. In combination, an unyielding cable, a yieldable cable, and supporting-means on which both are mounted and to which the yieldable cable is secured, the unyielding cable being freely movable longitudinally, and the yielding cable sustaining stresses of impacts imparted theerto by the unyielding cable.

5. In combination, a derrick, a block slidingly mounted in the upper end thereof, a sheave in said block, an unyielding cable reeved over said block, a boring-tool suspended from a depending end of said cable, means for longitudinally shifting said cable to and fro, an inelastic flexible linking means passed about said block and about the derrick to be supported thereon and depend therefrom, sheaves on said derrick over which said linking

means is passed, and a relatively short length of yieldable cable connected to each end of said linking means and adjustably secured at their lower ends to the lower part of the derrick.

1,204,100. PROJECTOR. CLARENCE W. WHITE and LOUIS RAY WHITE, North Bennington, Vt. Filed Feb. 17, 1915. Serial No. 8,728. (Cl. 240—44.)



1. A projector comprising in combination a reflector, a pivot block, means for pivotally supporting said pivot block on the projector, an incandescent lamp socket, and means for adjustably securing said lamp socket to said pivot block.

2. A projector comprising in combination a reflector, a pivot block, means for pivotally supporting said pivot block, means for supporting said pivot block supporting means on the projector, an incandescent lamp socket and means for adjustably securing said lamp socket to said pivot block.

3. A projector comprising in combination a reflector, a pivot block, means for pivotally supporting said pivot block, means for supporting said pivot block supporting means on the projector, an incandescent lamp socket, means for adjustably securing said lamp socket to said pivot block, and means for adjusting said lamp socket about said pivot block.

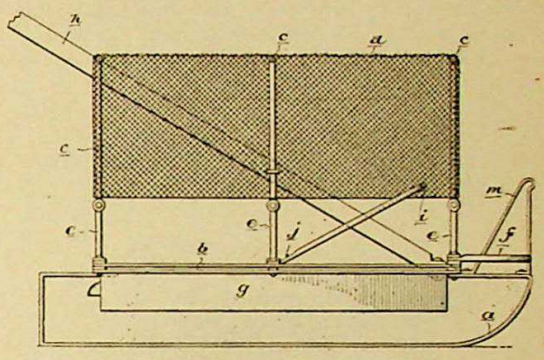
4. A projector comprising in combination a reflector, a pivot block, means for pivotally supporting said pivot block at right angles to the optical axis of said reflector, means for supporting said pivot block supporting means on the projector, an incandescent lamp socket, and means for adjustably securing said lamp socket to said pivot block.

5. A projector comprising in combination a reflector, a pivot block, means for pivotally supporting said pivot block at right angles to the optical axis of said reflector, means for supporting said pivot block supporting means on the projector, an incandescent lamp socket, means for adjustably securing said lamp socket to said pivot block, and means for adjusting said lamp socket about said pivot block.

1,204,101. COTTON-BOLL-WEEVIL DESTROYER. WILLIAM R. WHITE, Troy, Ala. Filed Aug. 9, 1916. Serial No. 113,937. (Cl. 43—1.)

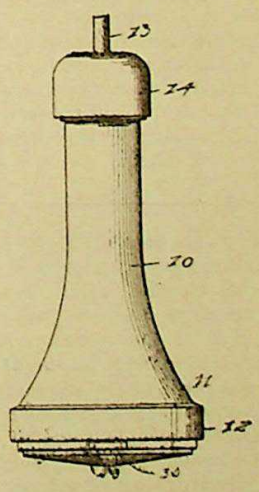
1. In an apparatus of the class set forth, transporting devices, a pair of frames carried thereby and projecting inwardly therefrom, a removable tray or pan supported by each of these frames, a series of bowed rods connecting the frames and provided with a covering to form a hood, and means within the hood for agitating the plants as the stalks thereof pass between the adjacent edges of said frames, said means consisting of a bow extending upwardly and forwardly from the frames.

2. In an apparatus of the class set forth, transporting devices, a pair of frames carried thereby and projecting inwardly therefrom, a removable tray or pan supported by each of these frames, a series of bowed rods connecting the frames and provided with a covering to form a hood, and means within the hood for agitating the plants as the stalks thereof pass between the adjacent edges of said frames, said means consisting of a bow extending upwardly and forwardly from the frames, said bow being adjustable upwardly and downwardly.



3. In an apparatus of the class set forth, transporting devices, a pair of frames carried thereby and projecting inwardly therefrom, a removable tray or pan supported by each of these frames, a series of bowed rods connecting the frames and provided with a covering to form a hood, and means within the hood for agitating the plants as the stalks thereof pass between the adjacent edges of said frames, said means consisting of a bow extending upwardly and forwardly from the frames, said bow being bendable upwardly and downwardly.

1,204,102. ROTARY GRINDING AND POLISHING TOOL. WILLIS WHITFORD, Vawn, Saskatchewan, Canada. Filed June 23, 1916. Serial No. 105,426. (Cl. 51—1.)



1. A polishing and grinding tool comprising a hollow handle, a shaft rotatably supported in said handle having one end slotted, a head removably secured to the slotted end of said shaft, and a sleeve fitted in said slot and non-rotatably engaged with said head.

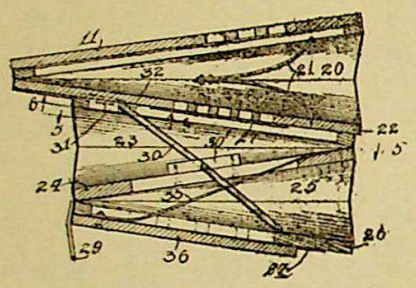
2. A rotary tool comprising a hollow handle, a shaft rotatably supported in said handle having one end slotted, a head detachably secured to the slotted end of said shaft and having a diametrical slot therein, and a substantially triangular key fitted in the slots in said shaft and said head for non-rotatably securing the latter against rotary movement upon said shaft.

3. A tool comprising a handle, a shaft rotatably supported within said handle, a head detachably secured to said shaft having a laterally projecting flange, a surfacing element supported in said flange, and spring actuated

pins carried by said flange and adapted to engage said surfacing element to secure the latter against removal.

4. A tool comprising a handle, having one end enlarged and provided with depending flanges forming an annular recess, a shaft rotatably supported in said handle, an apertured cap fitted over one end of said handle, a head detachably secured to said shaft and partially fitted within the annular recess, and the depending flanges of the enlarged ends of the handle, and a surfacing element detachably secured to said head, said enlarged portion of the handle acting as a guide to prevent the hand from coming in contact with the surfacing element when in use.

1,204,103. ORGAN-BELLOWS. GEORGE C. WICK, Chicago, Ill., assignor to Peter P. Bilhorn, Chicago, Ill. Filed Jan. 30, 1915. Serial No. 5,224. Cl. 230—36.)



1. In a bellows construction of the class described, the combination with a vacuum box of an organ, of a main vacuum bellows connected therewith, an auxiliary vacuum bellows connected to said main bellows and comprising two chambers collapsible from opposite ends, a pedal for operating one of said chambers, and connections between said chambers whereby said operation is imparted to the other chamber.

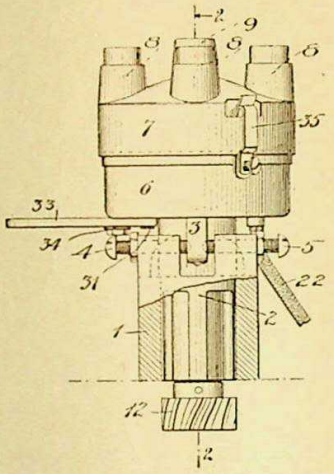
2. In a bellows construction of the class described, the combination with the vacuum box of an organ, of a main vacuum bellows connected therewith, an auxiliary vacuum bellows connected to said main bellows and comprising two chambers collapsible from opposite ends, a pedal for operating one of said chambers, a rod hinged intermediate said chambers and adapted upon the operation of one of said chambers to communicate said operation to the other chamber, and a single spring acting normally to retain both of said chambers expanded.

1,204,104. IGNITION MECHANISM FOR INTERNAL-COMBUSTION ENGINES. ERNEST C. WILCOX and JOHN F. CAVANAGH, Meriden, Conn., assignors to The Connecticut Telephone & Electric Company, Meriden, Conn., a Corporation of Connecticut. Filed Jan. 14, 1916. Serial No. 72,028. (Cl. 123—167.)

1. In an igniter apparatus of the character described, a timer housing, a unitary timer stationary element mounted therein and bodily removable therefrom and thereon and comprising a carrier movable relatively to said housing, a contact arm mounted on said carrier and having a contact point, a second stationary coöperating contact point mounted on said carrier and rotatable means for intermittently operating said arm to separate said contact points, with means mounted independently of said timer element for moving said carrier to vary the moment of operation of said cam on said arm.

2. In an igniter mechanism, a stationary timer housing, a cam shaft projecting thereinto and having a cam arranged therein, a timer element removably mounted in and on said housing and angularly adjustable therein relatively thereto and to said cam shaft, and means arranged externally of said timer housing and mounted independently of said timer element for shifting said timer element.

3. In an igniter mechanism, a relatively stationary timer housing, a relatively stationary distributer housing carried thereby and having distributer terminals, a cam shaft having a cam projecting into the timer housing, a radial distributer arm carried by said cam shaft and projecting into said distributer housing, a timer element mounted within and on said timer housing and including a carrier having a passage of sufficient size to permit said cam to pass therethrough, a movable contact arm mounted thereon having a contact point, a relatively stationary contact point also mounted on said carrier, said interrupter element being adjustable relatively to said stationary timer housing and distributer housing, and means mounted on the outside of said housing and projecting into the same for adjusting said interrupter element, and means for adjusting the stationary timer housing and distributer housing relatively to and around the axis of said cam shaft.



4. In an igniter mechanism, a relatively stationary distributer part including at least two terminals, a rotatable distributer arm including a contact adapted to intermittently close the circuit between said terminals and including a rotatable shaft, a timer housing surrounding said shaft and a timer element inclosed in said housing and mounted thereon, said timer element being rotatably adjustable relatively to said housing, said housing being relatively stationary, with means mounted independently of said timer element and outside said housing for rotatably shifting said timer element, said timer element including two make and break contacts, one of which at least is insulated from said timer element and said housing.

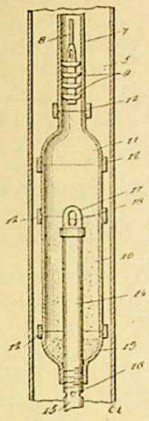
5. In an igniter mechanism, a relatively stationary timer and distributer housing with means for rotatably adjusting the same relatively to a fixed part, a shaft projecting into said housing, a radial distributer arm carried by said shaft within said housing, a cam carried by said shaft within said housing, said two housings being separable, a partially rotatable timer element removably mounted within and on said housing and including a carrier, a contact point carried thereby and stationary relatively thereto and another coöperating contact point carried thereby and movable relatively thereto, and means for moving said last mentioned contact point through the medium of said cam and means mounted independently of said timer element and external of said housing for moving said contact element in said housing to vary the moment of operation of said cam on said movable point.

[Claims 6 to 12 not printed in the Gazette.]

1,204,105. SAND-TRAP FOR OIL-WELLS. CLARENCE A. WILEY, Tulsa, Okla. Filed Oct. 17, 1914. Serial No. 867,197. (Cl. 103—64.)

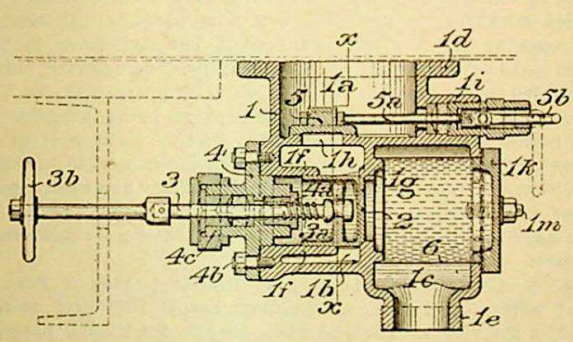
In a sand trap for oil well pumps, a working barrel, and an alined and perforated intake pipe spaced from said barrel, an enlarged settling chamber formed of a plurality of annular sections, threaded collars connecting the opposing ends of said sections, a valve on the upper end of said intake pipe extending within said setting chamber to

a point near the connected ends of two of said annular sections to permit easy access to said valve by separating



said sections, and reduced ends on the settling chamber connected to the working valve and to the intake valve.

1,204,106. TENDER-TANK VALVE. JOHN J. WING, Yonkers, N. Y. Filed Apr. 26, 1916. Serial No. 93,588. (Cl. 137—21.)

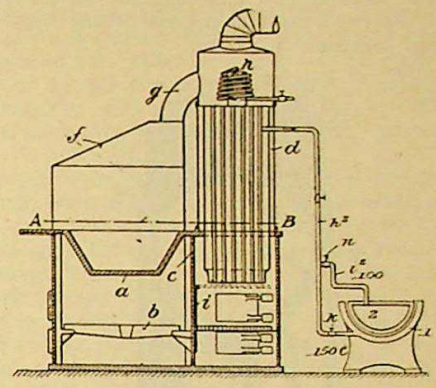


1. A valve casing provided at the top with flanges for attaching it to the underside of a tank floor, the upper part of the casing forming an inlet chamber, a horizontally sliding valve in said chamber to control the egress therefrom, a valve chamber located below one side of and normally communicating with said inlet chamber, a horizontally sliding valve in said valve chamber to control the egress therefrom, a strainer chamber located below the other side of said inlet chamber normally communicating with said valve chamber and provided with an outlook in its bottom, and manually operable means for actuating said valves, projecting horizontally from opposite sides of the casing.

2. A valve casing provided with means for attaching it to the underside of a tank floor, partitions in said casing dividing it into a vertical cylindrical inlet chamber at the top, and horizontal cylindrical valve and strainer chambers below, the partitions between the inlet and valve chambers and between the valve and strainer chambers having openings surrounded by valve seats, and the strainer chamber having a discharge opening in its bottom, horizontally movable valves in said inlet and valve chambers, respectively, to close said openings, and means for actuating said valves projecting through opposite sides of the casing.

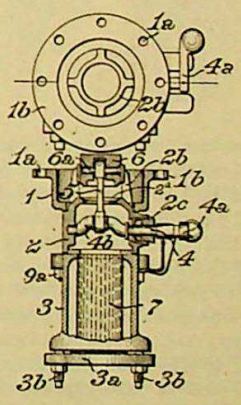
1,204,107. PRODUCTION OF STEREOTYPIC PRINTING-PLATES. CARL WINKLER, Bern, Switzerland. Filed Feb. 25, 1915. Serial No. 10,598. (Cl. 22—192.)

1. The process for casting stereotype plates which consists in keeping the parts of the mold at approximately constant but different temperatures during the time immediately preceding the flowing in of the molten metal, during the flowing in of the molten metal and during the cooling of the plate, by conducting a thermic agent of higher constant temperature through the jacket of the part carrying the matrix and a thermic agent of lower constant temperature through the other part of the mold, substantially as and for the purpose set forth.



2. The process of casting stereotype plates, consisting in subjecting the parts of the mold, prior to the introduction of the metal thereto, to the action of a heating medium to raise the part carrying the matrix to a temperature greater than the other part, and maintaining the parts of the mold at constant but different temperatures throughout the casting operation.

1,204,108. TENDER-TANK VALVE. WILLIAM E. WOODARD, Schenectady, N. Y., assignor to American Locomotive Company, New York, N. Y., a Corporation of New York. Filed Feb. 17, 1916. Serial No. 78,901. (Cl. 137—21.)

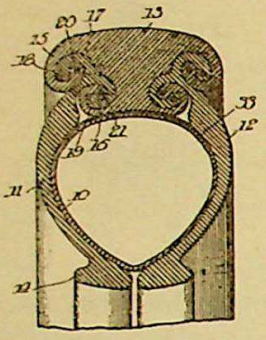


A valve casing of the class described, comprising a cup-shaped receiving section, having means for attaching it to the underside of a tank and an opening in its bottom, a cylindrical intermediate section, open at both ends, having a valve seat formed in its top, which projects into the opening in said cup-shaped member, and having valve guides projecting upwardly from around said valve seat, and a cylindrical strainer or delivery section, fitted against the lower end of said intermediate section and having a lateral outlet, bolts clamping said three sections together, a cap closing the lower end of said strainer or delivery section, a valve mounted in said guides, a crank-shaft journaled in the walls of said intermediate section and connected to said valve, and manually operable means on the end of said crank shaft.

1,204,109. REPLACEABLE-TREAD VEHICLE-TIRE. OTTO ZARTH, Aurora, Ill., assignor of one-half to William H. McCullouch, Aurora, Ill. Filed May 28, 1913. Serial No. 770,398. (Cl. 152—19.)

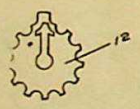
1. A pneumatic tire casing comprising side sections and a tread section, the tread section being provided at opposite sides of its tread portion with spaced flaps forming pockets and the side sections having spaced flaps forming pockets, the flaps of the side section fitting into the pockets of the tread section.

2. A pneumatic tire casing comprising side sections and a tread section, the tread section being provided at opposite sides of its tread portion with spaced flaps forming pockets and the side sections having spaced flaps forming pockets, the flaps of the side sections fitting into the pockets of the tread section, the interfitting flaps having interlocking elements.



3. A pneumatic tire casing comprising side sections and a tread section, the tread section being provided at opposite sides of its tread portion with spaced flaps forming pockets and the side sections having spaced flaps forming pockets, the flaps of the side sections fitting into the pockets of the tread section, the interfitting flaps having interlocking ribs and grooves in their contacting faces.

1,204,110. AIR-VALVE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM AIRD, Barrie, Ontario, Canada. Filed Nov. 15, 1915. Serial No. 61,586. (Cl. 137—26.)

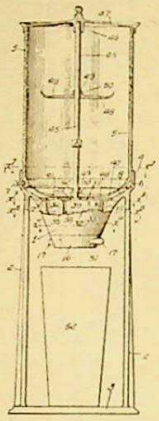


1. In an air valve for internal combustion engines and the like, an inlet manifold, an exteriorly threaded tube secured in said manifold and projecting therefrom, a substantially T-shaped pipe having one arm screw threaded to said tube and having another of its arms closed, a tubular valve screw threaded into the opening in the other arm of said pipe, air openings in said valve oppositely disposed in relation to one another and in relation to the ends of said valve, an operating rod rigidly secured to the outer end of said valve, a shoulder on the inner end of said rod adapted to abut the end of said pipe when the said valve is screwed tightly thereinto and a disk on the outer end of said rod for operating said valve.

2. The combination with a manifold pipe of a T pipe having one arm thereof closed, engaging said manifold pipe, two of the arms of said T pipe being internally threaded, a nipple threaded in one arm of the T pipe and threaded into said manifold pipe for connecting the same, a valve having a hollow externally threaded end engaging the threads of another arm of the T pipe for adjustment therein, said hollow arm of said valve having an elongated slot therein for movement into the end of the T pipe when the valve is rotated in one direction and for movement out of the T pipe when the valve is rotated in the opposite direction, a stem upon said valve, a handle attached to the stem, and retaining means upon the handle for showing the position of the valve.

1,204,111. MALTED-MILK DISPENSER. ARTHUR L. ANDERSON, Los Angeles, Cal. Filed May 22, 1915. Serial No. 29,908. (Cl. 221—109.)

1. A malted milk dispenser comprising a hopper having a downward passage, a guard-plate extending over said passage, a chamber formed between said passage and the guard-plate, a charge delivering device rotatable in said chamber and provided with pockets open at the top and bottom to receive a charge from the hopper in one position and to deliver it through the passage in another position, and oscillating means to rotate the charge-delivering device from pocket filling to pocket discharging position.



2. A dispenser comprising a hopper having a rim; a downwardly sloping wall extending from said rim; a seat at the lower end of said wall; a chamber below the level of the seat, a floor below the chamber, and a downward passage through the floor; a container seated in the rim; a guard-plate seated in the seat; a charge-delivering device mounted in the chamber; said guard-plate being provided with a closed portion over the passage and having an opening to allow material from the container to fall into said chamber, said charge-delivering device being provided with pockets open from the guard-plate to the floor and said charge-delivering device being adapted to be moved from a position where one of said pockets is closed by the floor and open to the container to another position where said pocket is open to the downward passage and closed to the container by the closed portion of the guard-plate; and means to move said charge-delivering device.

3. A dispenser comprising a hopper having a rim; a seat within said rim; a chamber below the level of the seat, a floor below the chamber, and a downward passage through the floor; a container seated in the rim; a guard-plate seated in the seat; a charge-delivering device mounted in the chamber; said guard-plate being provided with a closed portion over the passage and having an opening to allow material from the container to fall into said chamber, said charge-delivering device being provided with pockets open from the guard-plate to the floor and said charge-delivering device being adapted to be moved from a position where one of said pockets is closed by the floor and open to the container to another position where said pocket is open to the downward passage and closed to the container by the closed portion of the guard-plate; and means to move said charge-delivering device.

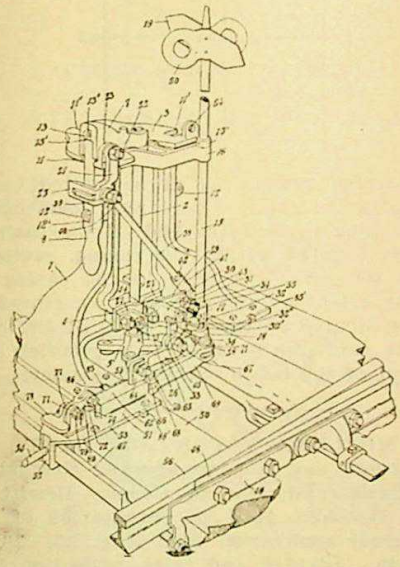
4. A malted milk dispenser comprising a hopper having a downward passage, a guard-plate extending over said passage, an annular chamber formed between said passage and guard-plate, a charge-delivering device rotatable in said chamber and having radial arms, pockets formed between said arms to receive a charge from the hopper in one position and to deliver it through the passage in another position, said pockets comprising parallel side walls and a movable transverse wall, the transverse wall having a top overhanging member and being adapted to be moved back and forth between said parallel side walls to contract or expand the pocket, said overhanging member being adjustably secured upon the top of the charge-delivering device to adjustably position the transverse wall and thereby regulate the amount of the charge, and means connected to rotate the charge-delivering device from pocket-filling to pocket-discharging position.

5. A malted milk dispenser comprising a hopper having a downward passage, a guard-plate extending over said passage, an annular chamber formed between said passage and guard-plate, a charge-delivering device rotatable in said chamber and having radial arms, pockets

formed between said arms to receive a charge from the hopper in one position and to deliver it through the passage in another position, said pockets comprising parallel side walls having ways at the tops thereof, a transverse wall having a top overhanging member and being adapted to be moved back and forth between said parallel side walls to contract or expand the pocket, said overhanging member running in said ways and being adjustably secured upon the top of the charge-delivering device to adjustably position the transverse wall and thereby regulate the amount of the charge, and means connected to rotate the charge-delivering device from pocket-filling to pocket-discharging position.

[Claims 6 to 10 not printed in the Gazette.]

1,204,112. INTERLOCKING AND TARGET-OPERATING SWITCH-STAND. FRANK C. ANDERSON, Cincinnati, Ohio, assignor to The American Valve & Meter Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 18, 1914. Serial No. 872,744. (Cl. 104—25.)



1. In combination with a switch stand and interlocking mechanism for said switch stand, an interlock-operating lever mounted on said switch stand and swinging in substantially a single plane, a switch-operating element requiring initial movement in one plane before being movable in another plane to operate the switch, and disengageable operative connection between this element and said lever, whereby said lever is swung during said initial movement of said element, and operative connection between said lever and said interlocking mechanism, comprising two arms and a shaft fixed together, a bearing for the shaft whereby said arms swing in a plane substantially parallel with that of said interlock-operating lever, connecting rod from said lever to one of the arms, and connection from the other arm to the interlocking mechanism.

2. An operative connection for a switch-stand interlock-operating lever and an interlocking mechanism, comprising an arm, a shaft and a head fixed together, a bearing for said shaft, and an arm adjustably secured in said head, a connecting rod from said lever to the first mentioned arm, and operative connection from the adjustably secured arm to the interlocking mechanism.

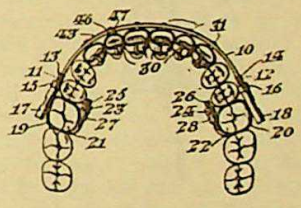
3. An operative connection for a switch-stand interlock-operating lever and an interlocking mechanism, comprising an arm, a shaft and a head fixed together, a bearing for said shaft, an arm removably fixed in said head, said head having means whereby the arm may be fixed therein at a substantially different angle, a connecting rod from said lever to said first mentioned arm, operative connection from said lever to said first mentioned arm, and operative connection from the removably fixed arm to the interlocking mechanism.

4. An operative connection for a switch-stand interlock-operating lever and an interlocking mechanism, comprising an arm, a shaft and a head fixed together, a bearing for said shaft, an arm removably fixed in said head, said head having means whereby the arm may be fixed therein at a substantially different angle, a connecting rod from said lever to said first mentioned arm, operative connection from the removably fixed arm to the interlocking mechanism, and a stop on said bearing for one of said arms.

5. An operative connection for a switch-stand interlock-operating lever and an interlocking mechanism, comprising an arm, a shaft and a head fixed together, a bearing for said shaft, an arm removably fixed in said head, said head having means whereby the arm may be fixed therein at a substantially different angle, a connecting rod from said lever to said first mentioned arm, operative connection from the removably fixed arm to the interlocking mechanism, said bearing comprising a cap which is reversible thereon, and stops on said cap for one of said arms, either one or the other of said stops coming into use accordingly as the cap is reversed or not.

[Claims 6 and 7 not printed in the Gazette.]

1,204,113. ORTHODONTIC APPLIANCE. EDWARD H. ANGLE, New London, Conn. Filed May 19, 1914. Serial No. 839,541. (Cl. 32—19.)



1. An orthodontic appliance, comprising tooth-engaging means having a slot provided with a grooved wall, an arch-bar arranged to be snugly fitted in said slot and having a groove extending longitudinally thereof and in registry with the groove in the wall of said slot, and complementary therewith to form a keyway, and means extended through said keyway for rigidly connecting said arch-bar with said tooth-engaging means in detachable relation.

2. An orthodontic appliance, comprising tooth-engaging means provided with a projection having a grooved free member extending toward one edge thereof, between which and said tooth-engaging means is a recess in which an arch-bar may be retained.

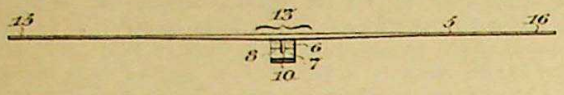
3. An orthodontic appliance, comprising tooth-engaging means provided with a projection having a grooved free member extending toward one edge thereof and forming a recess, and an arch-bar detachably fitted in said recess and having a groove arranged to register with the groove in said free member.

4. An orthodontic appliance, comprising an arch forming bar arranged to be engaged with a tooth engaging member, and having a groove extending substantially from end to end in the side thereof, arranged to register with a groove in said member and adapted to receive a securing device.

5. An orthodontic appliance, comprising tooth-engaging means having a slot provided with a grooved wall, an arch-bar arranged to be snugly fitted in said slot and having a groove extending longitudinally thereof and in registry with the groove in the wall of said slot and complementary therewith to form a keyway, and abutments on said arch-bar arranged to engage said tooth-engaging means to prevent its longitudinal movement with respect thereto, and means extended through said keyway for rigidly connecting said arch-bar with said tooth-engaging means in detachable relation.

[Claims 6 to 10 not printed in the Gazette.]

1,204,114. ORTHODONTIC APPLIANCE. EDWARD H. ANGLE, New London, Conn. Filed Aug. 2, 1915. Serial No. 43,134. (Cl. 32—12.)



1. An orthodontic appliance comprising a tooth-band tapering from its medial region.

2. An orthodontic appliance comprising a tooth-band having means to engage an arch-bar, and having the portion adjacent to said means relatively thicker than the remainder of said band.

1,204,115. OILLESS SPINDLE. LEIGH S. BACHE, Middlesex borough, N. J., assignor of one-half to Bound Brook Oil-Less Bearing Company, Boundbrook, N. J., a Corporation of New Jersey. Filed Oct. 19, 1915. Serial No. 56,803. (Cl. 64—56.)

1. A spindle bearing embodying a bolster bearing and step bearing formed of fibrous material impregnated with a lubricant, and having a metallic anti-friction step bearing comprising a ball race and balls, said race embedded in the fibrous material and serving as a bearing for the end of the spindle whereby said spindle and metallic step-member generate sufficient heat to withdraw the lubricant from the fibrous bearing members and whereby said lubricant is distributed about the end of the spindle, and an adjusting device for moving the anti-friction member.

2. A spindle bearing embodying a bolster bearing and step bearing formed of fibrous material impregnated with a lubricant, and having a metallic anti-friction step member embedded in the fibrous material and serving as a bearing for the end of the spindle whereby said spindle and metallic member generates sufficient heat to withdraw the lubricant from the fibrous bearing members and whereby said lubricant is distributed about the end of the spindle, and an adjusting device for moving the anti-friction member, and heat insulating means between the adjusting device and anti-friction member for preventing dissipation of heat between the spindle, the bearing and the containing casing of the spindle.

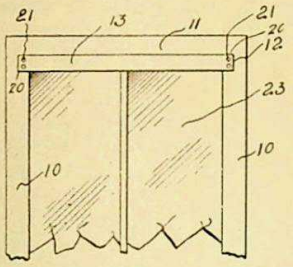
3. A spindle bearing embodying a bolster and a step formed of fibrous material impregnated with a lubricant and having an anti-friction heat generating member embedded in the fibrous material and serving as a thrust for the end of the spindle whereby said spindle and anti-friction member generate sufficient heat to withdraw the lubricant from the fibrous bearing, and a ventilating duct extending into said parts.

4. A spindle bearing embodying a bolster and a step formed of fibrous material impregnated with a lubricant and having an anti-friction heat generating member embedded in the fibrous material and serving as a thrust for the end of the spindle whereby said spindle and anti-friction member generate sufficient heat to withdraw the lubricant from the fibrous bearing, a heat insulating adjusting device for adjusting said anti-friction member, and a ventilating duct extending through said adjusting device.

5. A spindle bearing embodying a bolster formed of fibrous material impregnated with a lubricant, and forming a self-lubricating bolster for the spindle, and an anti-friction step bearing consisting of a ball race and balls, said race adjustably supported with reference to the end of the spindle whereby said spindle may be held in fixed relation of adjustment with reference to the self-lubricating bolster, said spindle and anti-friction bearing adapted to generate sufficient heat to withdraw a film of lubricant from the fibrous bearing.

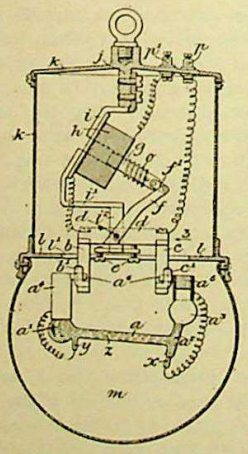
[Claim 6 not printed in the Gazette.]

1,204,116. WINDOW-SCREEN. GEORGE W. BAILEY, Rochester, N. Y. Filed June 25, 1915. Serial No. 36,296. (Cl. 156—38.)



A roller screen comprising an elongated casing having openings in the end walls thereof, longitudinally extending attaching tabs at the end of the casing, and a spring roller mounted within the casing, pintles on the ends of the roller for reception in the casing openings and inwardly extending and centrally apertured concavo-convex disks secured to the end walls of the casing for receiving the said pintles and for preventing longitudinal movement of the roller within the casing.

1,204,117. MERCURY-VAPOR-ARC LAMP. CHARLES ORME BASTIAN and ALBERT EDWARD SALISBURY, London, England, assignors to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Aug. 25, 1904, Serial No. 222,148. Divided and this application filed Nov. 12, 1915. Serial No. 61,160. (Cl. 176—42.)



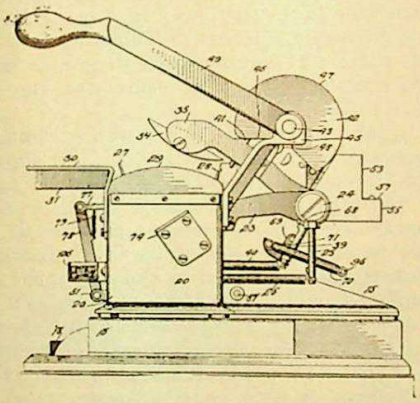
1. A gas or vapor electric apparatus comprising a tube, a receptacle at one end of said tube and electrode material therein, another receptacle at the other end of said tube and electrode material therein, and a leading-in conductor for each receptacle, the bore of the tube being reduced in the neighborhood of one of the electrodes, and the receptacle at one end of the tube having an internal capacity such that it will not quite receive all the mercury out of the tube.

2. A gas or vapor electric apparatus comprising an approximately horizontal tube, a receptacle at one end of

said tube and electrode material therein, a considerable portion of the receptacle being above the level of the tube, another receptacle at the other end of said tube and electrode material therein, and a leading-in conductor for each receptacle, the electrode material of one of the receptacles extending into a portion of the tube and the bore of the tube being reduced in the neighborhood of said receptacle, whereby the electrode material at that end of the tube extends into the receptacle and also into the reduced portion of the tube in the other direction, so as to form a butt end on which the pressure caused by the passage of electric current in the tube during operation may be exerted.

3. In a gas or vapor electric apparatus, the combination with a tube having a receptacle at one end and electrode material therein and another receptacle at the other end thereof and electrode material therein, a leading-in conductor for each receptacle, the bore of the tube being reduced in the neighborhood of one of the receptacles and means for causing the electrode material in the tube to fill the bore of the tube at the reduced portion, whereby the said electrode material shall produce a butt end or ends for the pressure of the vapor path to act upon.

1,204,118. MACHINE FOR BANDING BILLS AND THE LIKE. CHARLES S. BATDORF, Brooklyn, N. Y. Filed Oct. 20, 1915. Serial No. 56,848. (Cl. 93—93.)



1. A banding machine of the character described comprising a bed having a concave face transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in over-lapping relation and secured together, means for moving said presser or platen forcibly against said bundle of bills to concave the same preparatory to the ends of the strip being secured together on the outer face of said presser or platen, and in combination and coöperating therewith means for rendering one end of said strip adhesive, means for folding one end of said strip over upon said presser or platen and means for then folding the other end of said strip over upon said first folded end of the strip and pressing said ends together upon the presser or platen so as to effect their firm adherence to each other.

2. A banding machine of the character described comprising a bed having a concave face transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in over-lapping relation and secured together, means for moving said presser or platen forcibly against said bundle of bills to concave the same preparatory to the ends of the strip being secured together on the outer face of said presser or platen, and in combination and coöperating therewith means for moistening a gummed end of said strip so as to render the same adhesive, means for folding one end of said strip over upon said presser or platen and means for then folding the other end of said strip over upon said first folded end of the strip and pressing said ends together upon the presser or platen so as to effect their firm adherence to each other.

3. A banding machine of the character described comprising a bed having a concave face transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in over-lapping relation and secured together, means for moving said presser or platen forcibly against said bundle of bills to concave the same preparatory to the ends of the strip being secured together on the outer face of said presser or platen, and in combination and coöperating therewith means for rendering one end of said strip adhesive, means for folding the non-adhesive end of said strip over upon said presser or platen and means for folding the adhesive end of said strip over upon the non-adhesive end thereof and ironing the same down thereon.

4. A banding machine of the character described comprising a bed having a concave face transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in overlapping relation and secured together, means for moving said presser or platen forcibly against said bundle of bills to concave the same preparatory to the ends of the strip being secured together on the outer face of said presser or platen, and in combination and coöperating therewith means for rendering one end of said strip adhesive, means for folding the non-adhesive end of said strip over upon said presser or platen and means comprising a roller and connections for driving the same in a horizontal direction for folding the adhesive end of said strip over upon the non-adhesive end thereof and ironing the same down thereon.

5. A banding machine of the character described comprising a bed across which a banding strip may be extended and against which strip and over which bed a bundle of bills to be banded may be placed, a presser or platen to engage said bundle and having an outer surface upon which the end portions of said strip may be folded in overlapping relation and secured together, means for moving said presser or platen forcibly against said bundle of bills preparatory to the ends of the strip being secured together on the outer face of said presser or platen, and in combination and coöperating therewith means for rendering one end of said strip adhesive, means for folding one end of said strip over upon said presser or platen, and means for then folding the other end of said strip over upon said first folded end of the strip and pressing said ends together upon the presser or platen so as to effect their firm adherence to each other.

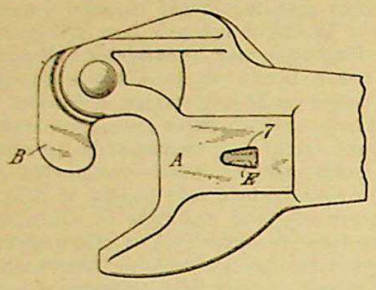
[Claims 6 to 10 not printed in the Gazette.]

1,204,119. CAR-COUPLING. ARTHUR J. BAZELEY, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 27, 1915. Serial No. 68,668. (Cl. 213—14.)

1. In a car coupler, a lock and a lock-lifter, the lifter being capable of engagement with the lock in two positions only one of which is an operative position, and a coupler head having a wedge shaped lifter opening, the shank of the lifter being also wedge shaped to conform to the lifter opening and permitting the application of the lifter to the lock in operative position only.

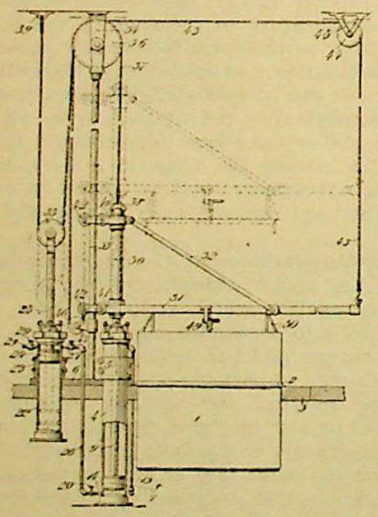
2. In a car coupler, a coupler head, a lock, and a lock-lifter, said lifter having trunnions at its lower end and faces at the rear side of said lower end adapted to cooperate with the coupler head when the lifter is in normal relation with the lock and the lock is in lowermost

position to act as a down hold for the lock, a slot in the lock adapted to receive said lifter trunnions, said lifter being capable of engagement with said lock in two diametrically opposite positions, only one of which is an operative position, the coupler head having an aperture



of non-symmetrical cross section corresponding to the cross sectional shape of the lifter at its upper end, and being thereby adapted to permit the engagement of the lifter and the lock in operative position only.

1,204,120. LIQUID-COATING MACHINE. REME ALBERT BEAUSEJOUR, Brooklyn, N. Y., assignor to Standard Varnish Works, New York, N. Y., a Corporation of New York. Filed July 21, 1909. Serial No. 508,734. (Cl. 91—46.)



1. In a machine of the character described, a tank, an article supporting bracket, a steadying device engaging both ends of the bracket, and a plurality of raising and lowering devices for said bracket.

2. In a machine of the character described, a tank, an article supporting bracket, a flexible steadying device engaging both ends of the bracket, and a plurality of raising and lowering devices for said bracket.

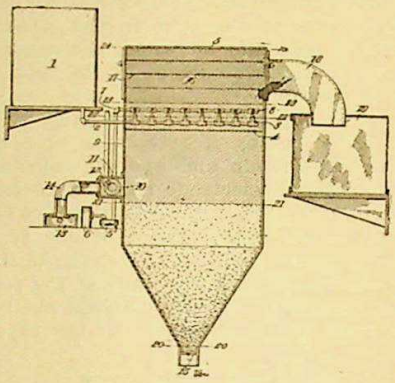
3. In a machine of the character described, a tank, an article supporting bracket, a flexible steadying device engaging both ends of the bracket, and a plurality of fluid operated raising and lowering devices for said bracket.

4. In a machine of the character described, a tank, an article supporting bracket, a plurality of interconnected devices for raising and lowering the bracket, and flexible means connected to one of said devices for steadying the bracket in its vertical movement.

5. In a machine of the character described, a tank, an article supporting bracket, a plurality of fluid operated interconnected devices for raising and lowering the bracket, and flexible means connected to one of said devices for steadying the bracket in its vertical movement.

[Claims 6 to 12 not printed in the Gazette.]

1,204,121. APPARATUS FOR THE EVAPORATION OF FLUIDS. FREDERICK PENTZ BERGH, HUGO J. LOEBINGER, and HENRY CHARLES NEUBERGER, New York, N. Y., assignors, by mesne assignments, to General Reduction Company, New York, N. Y., a Corporation of New York. Filed Apr. 14, 1911, Serial No. 621,142. Renewed Apr. 10, 1916. Serial No. 90,284. (Cl. 99—5.)



1. An apparatus for evaporating fluids containing in solution, suspension or emulsion a solid, viscid or oily content consisting of a polygonal vaporizing chamber, atomizing means placed adjacent one wall of the chamber and operable to project spray in a layer from said wall across the chamber, means to admit in a substantially horizontal sheet a vaporizing body of gas to said chamber below the atomizer and exit means for the vapor, substantially as described.

2. An apparatus for the evaporation of fluids consisting of a vaporizing chamber, a source of fluid supply, atomizing means communicating with said source and mounted adjacent the wall of the chamber and having means to project spray across the chamber, means below the atomizing means to admit a body of moving vaporizing gas in a sheet substantially parallel to the spray but at an angle to the projected movement of the spray, and an effluent opening above the atomizer, substantially as described.

3. An apparatus for the evaporation of fluids consisting of a chamber in which the evaporation is conducted, atomizing means in said chamber operable to direct the spray in a layer across the chamber, means of fluid supply communicating with said atomizer, and an elongated gas admitting opening below the atomizer and extending longitudinally at an angle to the length of the atomizer, and an effluent opening above the atomizer, substantially as described.

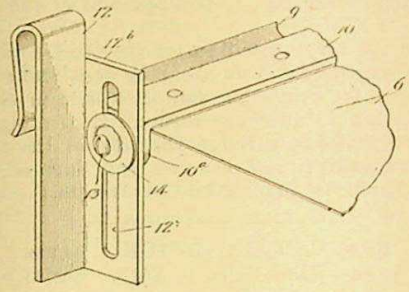
4. An apparatus for evaporation of fluids, consisting of a chamber in which the evaporation is conducted, an atomizer in said chamber extending across the same and having means to direct the spray in a horizontal layer across the area of the chamber, said chamber having a gas admitting opening below the atomizer and extending at an angle to the atomizer, means to impel a body of gas through said opening at an angle to the projected movement of the spray and said chamber having an elongated opening above the atomizer and on the same side of the chamber as the atomizer to permit the escape of the effluent, substantially as described.

5. An apparatus for the evaporation of fluids, consisting of a polygonal vessel, a source of fluid supply, an atomizer located within said vessel against one side wall thereof and extending the entire width of said wall, said atomizer having means to project the spray from the wall across the interior of the vessel in a horizontal layer, said vessel having below the level of the atomizer an elongated, rectangular opening in a side of the wall adjacent to and at an angle to the atomizer-supporting wall, said opening extending substantially the entire width of its wall and a rectangular opening above the atomizer and through the side or wall of the chamber on which the atomizer is mounted, said opening extending substantially the entire

width of the wall, means to impel a body of gas through said first opening and an exit pipe leading from the upper opening, substantially as described.

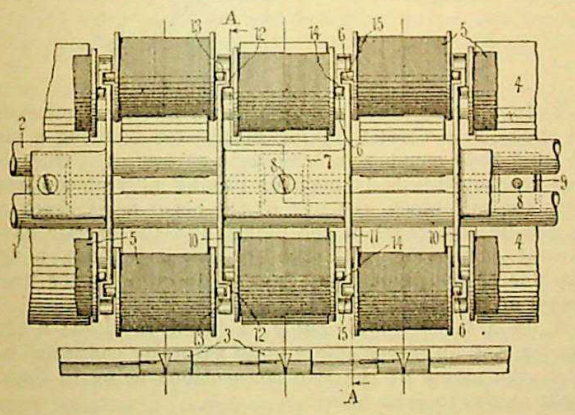
[Claims 6 to 10 not printed in the Gazette.]

1,204,122. WIND-SHIELD PROTECTOR. IRWIN C. BOWMAN, Chicago, Ill. Filed Mar. 20, 1916. Serial No. 85,338. (Cl. 20—40.5.)



A protector comprising a hook for readily detachably supporting the same from the upper edge of a wind shield, a body or hood connected thereto so as to be vertically adjustable for the height of the user and pivotally adjustable near its rear edge for weather conditions and a flexible strip closing the space between such rear edge and the wind shield and permitting such pivotal and sliding movement while maintaining the space closed.

1,204,123. TAKE-UP MECHANISM FOR SPINNING, WINDING, OR DOUBLING MACHINES. EDWARD E. BRADLEY, Stonington, Conn., assignor to The Atwood Machine Company, Stonington, Conn., a Corporation of New Jersey. Filed May 8, 1915. Serial No. 26,808. (Cl. 242—131.)

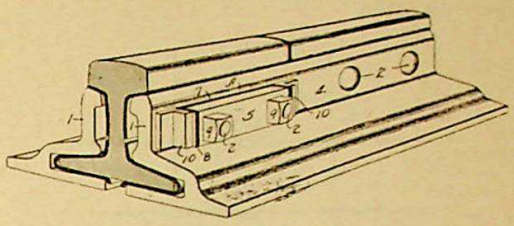


In a machine of the character described, a bank of brackets provided with arms arranged in pairs, each arm having, in one side thereof, a bearing guide in one plane for the gudgeon of one bobbin and in the other side thereof in another plane a bearing guide for the gudgeon of an adjacent bobbin, the two guides of each arm being thus offset and the guides for the row of bobbins being arranged in pairs in staggered order so that alternate bobbins will be arranged in alinement.

1,204,124. INSULATED RAIL-JOINT. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, a Corporation of New York. Filed July 10, 1916. Serial No. 108,432. (Cl. 239—5.)

1. An insulated rail joint including in combination with the rails and joint bolts, a splice bar having bolt holes and abutments adjacent thereto, and an insulated pressure-transferring element engaging the bolts and said abutments.

2. An insulated rail joint including in combination with the rails and joint bolts, a splice bar having bolt holes, and rigid abutments adjacent thereto, and an insulated pressure transferring element snugly fitting said bolts and engaged by said rigid abutment means.



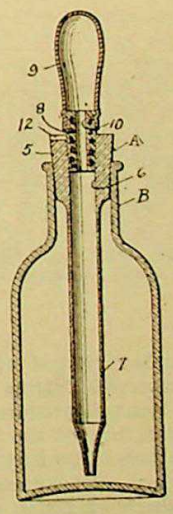
3. An insulated rail joint including in combination with the rails and joint bolts, a splice bar having bolt holes, and abutment means adjacent thereto, and insulated means carried by said bolts for engaging with said abutment means to center the bolts in the bolt holes in the splice bar.

4. An insulated rail joint including in combination with the rails and joint bolts, a splice bar having holes for loosely receiving the bolts, and rigid abutment means adjacent said holes, and insulated means carried by said bolts for transferring end-wise pressure of the rails to said abutment means.

5. An insulated rail joint including in combination with the rails and joint bolts, a splice bar having bolt holes and also having abutment elements disposed on opposite sides of said bolt holes, and insulated means carried by said bolts for transferring end-wise pressure of the rails to said abutment means.

[Claims 6 to 10 not printed in the Gazette.]

1,204,125. BOTTLE-STOPPER AND DROPPER. EDWARD J. BROSNAN, Troy, N. Y. Filed July 5, 1916. Serial No. 107,598. (Cl. 215—16.)

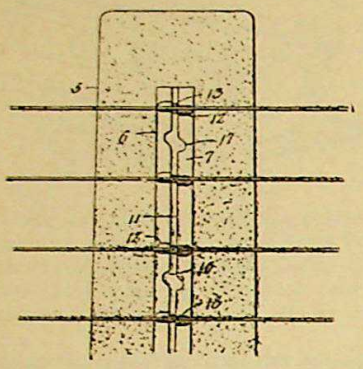


The combination with a bottle-stopper having a passage therethrough, and a dropping tube forming a continuation of the stopper and communicating with one end of the passage, of an apertured plug inserted in the other end of the passage, and a collapsible bulb carried by the plug, said plug and bulb being removable from the passage for the substitution of a closure therefor.

1,204,126. WIRE-FASTENER FOR POSTS. PHILIP F. BUTZER, Boonville, Mo. Filed Feb. 8, 1916. Serial No. 76,986. (Cl. 256—49.)

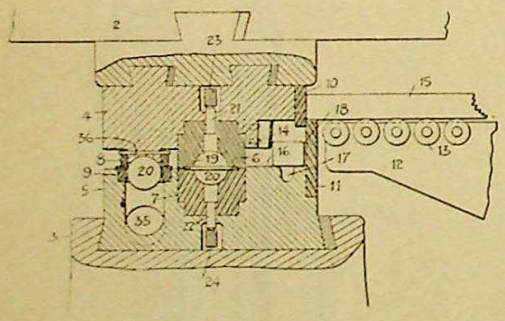
1. A wire fastener for posts comprising a hollow member adapted to be fastened upon the post, and having a longitudinal slot in one wall thereof, said wall being provided with outwardly bulged portions arranged at the opposite sides of the slot and slightly out of alinement with each other, a staple including spaced limbs and right angularly disposed offset portions, the latter being adapted

to be fitted within the pockets defined by said bulged portions, whereby the limbs project outwardly through said slot and are adapted to be bent around the wire for the purpose described.



2. A wire fastener for posts comprising a hollow member adapted to be fastened upon the post and having a longitudinal slot in one wall thereof, said wall being provided with outwardly bulged portions arranged at the opposite sides of the slot, the opposite edges of said slot being cut away, said cut away portions unitedly defining an enlarged oblong opening, and a staple including spaced limbs and right angularly disposed offset portions, the latter being adapted to be fitted within the pockets defined by said bulged portions whereby the limbs project outwardly through the slot and are adapted to be bent around the wire for the purpose described.

1,204,127. PROCESS OF AND APPARATUS FOR FORGING BALLS. FERDINAND MORA CANDA, Plainfield, N. J. Filed Feb. 23, 1915. Serial No. 9,844. (Cl. 29—148.)



1. The herein described method of forging balls and like objects, which comprises cutting heated billets into blanks, pressing each blank as produced, to form, between suitable dies, and then cutting off the fin produced by such dies, the several operations of producing the blanks, pressing such blanks into form, and cutting off the fins, being performed each as a single operation and all at one heat.

2. Means for forging balls and the like, comprising in combination cutting off means for cutting successive blanks from a body of metal, pressure forming means for pressing such blanks to form, and fin cutting means, and a single operating device for all of said three means, whereby the several operations of cutting off, pressing to form, and removing the fin, may be performed in one heat and by successive transfer of blanks from the cutting off means to the pressure means, and thence to the fin cutting means.

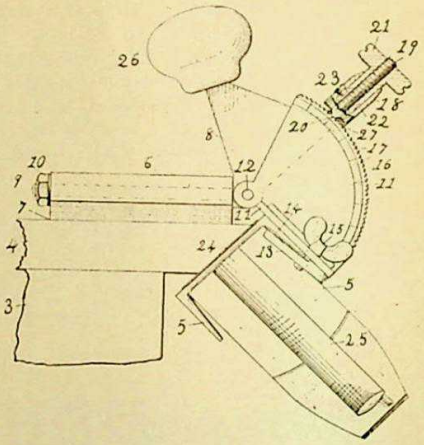
3. Means for forging balls and the like, comprising in combination cutting off means for cutting successive blanks from a body of metal, pressure forming means for pressing such blanks to form, and fin cutting means, and a single operating device for all of said three means, whereby the several operations of cutting off, pressing to form, and removing the fin, may be performed in one heat and by successive transfer of blanks from the cutting off means to the pressure means, and thence to the fin cutting means, and means for freeing the formed article from the pressing means.

4. Means for forging balls and the like, comprising in combination cutting off means for cutting successive blanks from a body of metal, pressure forming means for pressing such blanks to form, and fin cutting means, and a single operating device for all of said three means, whereby the several operations of cutting off, pressing to form, and removing the fin, may be performed in one heat and by successive transfer of blanks from the cutting off means to the pressure means, and thence to the fin cutting means, and a gravity delivery passage through which the formed articles may escape upon removal of the fins therefrom.

5. Means for forging balls and the like, comprising in combination cup dies and fin-shearing dies, and a single operating means for operating said dies, one of the fin cutting dies having an aperture through it of a size adapted to permit the passage through that die of the formed object after the fin has been removed from such object.

[Claims 6 to 9 not printed in the Gazette.]

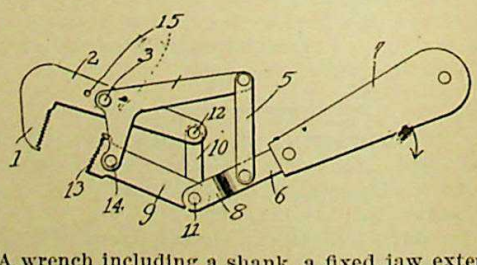
1,204,128. BENCH-PLANE GUIDE. ALBERT CARLSON, Seattle, Wash. Filed Sept. 2, 1915. Serial No. 48,712. (Cl. 145—20.)



1. In a bench plane guide, a block having a plane face to slide on; a carrier having means for securing a plane to it; a body member intermediate between the said block and carrier, this body member having pivotal connection with the said block, the line of the pivot being transverse to the line of travel of the plane, and the carrier having pivotal connection with the intermediate body member the line of the pivot being in the direction of the line of travel of the plane.

2. In a bench plane guide, a block to slide; a plane carrier, and an intermediate body pivotally connected with each, the pivots of the two connections being in lines at right angles to each other.

1,204,129. WRENCH. LEONARD A. CARNER, Mountain View, Ark., assignor of one-half to Lewis E. Johnson, Mountain View, Ark. Filed Aug. 17, 1916. Serial No. 115,472. (Cl. 81—91.)

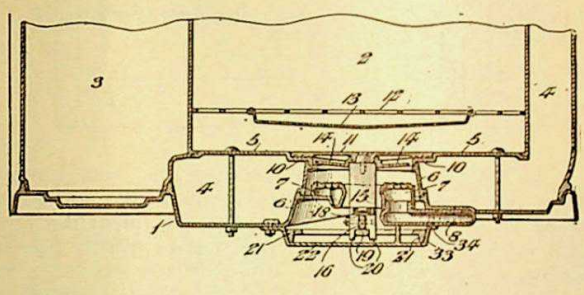


1. A wrench including a shank, a fixed jaw extending at an angle therefrom, a bell crank lever pivotally connected at its angle to said shank, a second shank pivotally connected to one of the arms of the bell crank lever and having a jaw at one end, a link pivotally connecting the other end of said shank to the corresponding end of the first named shank, a handle, a stem extending therefrom

and pivotally connected to the second shank at its point of connection with the link, and a link connection between the stem and the other arm of the bell crank lever.

2. A wrench including a shank, a jaw extending at an angle therefrom, a bell crank lever pivotally connected at its angle portion upon said shank, a link extending from the other end of said shank, a second shank pivotally connected at one end to said link and at its other end to one of the arms of the bell crank lever, said second shank having a jaw at that end thereof adjacent the bell crank lever, a handle pivotally connected to the second shank at its point of connection with the link, and a link connection between said handle and the other arm of the bell crank lever, said bell crank lever being adjustably connected to the first named shank.

1,204,130. COMBINED COAL AND GAS STOVE. CHARLES D. CARTER, New York, and GEORGE F. BIBB, Troy, N. Y., assignors to The Floyd-Wells Company, Royersford, Pa., a Corporation of Pennsylvania. Filed May 6, 1916. Serial No. 95,778. (Cl. 126—36.)



1. A stove of the order of a coal stove having an oven, an auxiliary compartment having communication therewith, a gas burner in said compartment, a vertically movable valve, the bottom of said oven being adapted to form a seat for said valve, an axially-disposed hanger forming a support for said valve, and horizontally-movable means acting on said hanger to give vertical movement to said valve.

2. A stove of the order of a coal stove having an oven, an auxiliary compartment having communication therewith, a gas burner in said compartment, the bottom of said oven being adapted to form a seat for said valve, a vertically movable valve adapted to said seat, an axially-disposed hanger forming a support for said valve, and a horizontally-movable inclined plane acting on said hanger to give vertical movement to said valve.

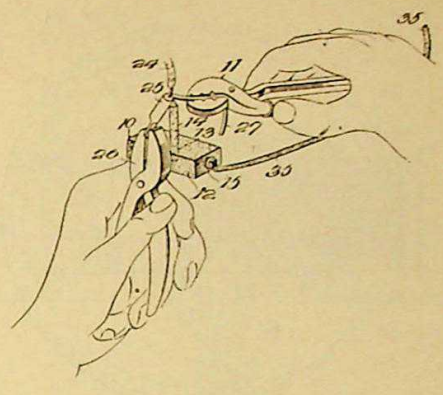
3. A stove of the order of a coal stove having an oven, an auxiliary compartment having communication therewith, a gas burner in said compartment, the bottom of said oven being adapted to form a valve seat, a vertically movable valve adapted to said seat, an axially-disposed hanger forming a support for said valve, horizontally-movable means acting on said hanger to give vertical movement to said valve, and an air-inlet controlling valve movable with said horizontally-movable means.

4. An oven, an auxiliary compartment, a passage forming a direct communication for said compartment and oven, a gas burner in said compartment, a valve for said passage adapted to open and close the same, a supporting hanger for said valve, an inclined member in said compartment adapted to engage said hanger, a slide valve, said hanger being bifurcated and receiving the said inclined member, and means for operating said member and said valve to open said communication.

5. A compartment, a gas burner therein, means for supplying said burner with gas, a valve and valve controlling mechanism, an air chamber for said burner, the wall of said chamber having therein an air inlet, a horizontally slidable valve in said chamber movable with said valve controlling mechanism and adapted to open and close said inlet, means movable with said horizontally-slidable valve for operating said valve, and a slidable connection between said valve and the first-named valve controlling mechanism.

[Claims 6 to 15 not printed in the Gazette.]

1,204,131. SOLDERING APPARATUS. JOHN G. CLEMENS, Buffalo, N. Y. Filed Feb. 25, 1916. Serial No. 80,451. (Cl. 219—12.)



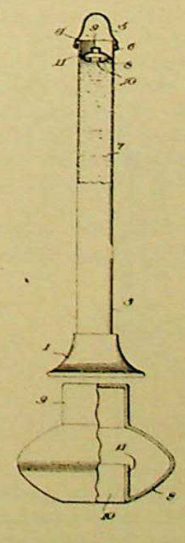
1. A soldering apparatus including a block of carbon, means for supplying current to the carbon, the carbon being formed with a socket in one face, a carbon contact member seating in the socket and adapted to be engaged by work being soldered, and a return conductor for the current in the form of a piece of solder also adapted to be brought into engagement with the work.

2. A soldering apparatus including a pair of pliers having grooved jaws and handles, means for connecting a current supply wire to such handle, a piece of string solder adapted to be held in the pliers, a carbon contact member adapted to engage work being soldered, and means for connecting the current return wire to the carbon contact member.

3. In a soldering apparatus, a block of carbon formed with a socket in one face, a contact member of high resistance material having one end seated in the socket and its opposite end formed with a point, and means for connecting a current conducting wire to the block.

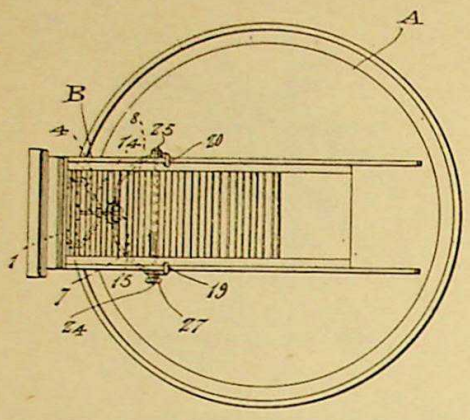
4. A soldering apparatus including a contact member of high resistance material adapted to be connected in one arm of a circuit and to be engaged by work being soldered, and a piece of string solder adapted to be connected in the other arm of the circuit and to operate to open and close the circuit by being moved into and out of engagement with the work being soldered.

1,204,132. TOY. JOHN G. CLEMENS, Buffalo, N. Y. Filed Mar. 22, 1916. Serial No. 86,026. (Cl. 46—37.)



A submergible image comprising a hollow body having an inlet opening in its under side, the body being provided interiorly with a wall surrounding the said opening adapted to retain a predetermined volume of liquid within the said body.

1,204,133. WASHBOARD-CLAMP. ALOYSIUS COLL, Clarksburg, W. Va. Filed Oct. 22, 1915. Serial No. 57,329. (Cl. 68—29.)

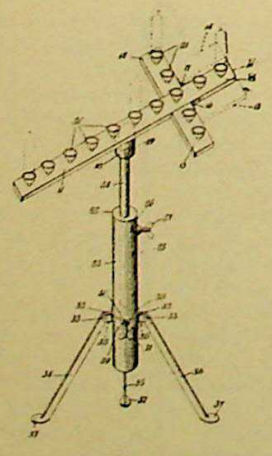


1. A washboard holder comprising a pair of relatively adjustable arms adapted to underlie the washboard when the latter is in operative position within a wash tub, means carried by the arms for engaging the washboard, one of the said arms having a threaded opening therein, a rod having one end connected to the other arm and having its opposite end threaded and received by the threaded opening in the first-mentioned arm, and means adjustably mounted on the last-mentioned end of the rod and operable against the adjacent arm and adapted when operated to effect adjustment of the arms, and means for attaching the arm to the wash tub.

2. A washboard holder comprising a board-engaging member having a threaded sleeve, a tub-engaging member located in spaced relation with the board-engaging member, a threaded sleeve carried by the tub-engaging member and alining with the sleeve on the board-engaging member, a screw adjustably mounted within the threaded sleeves, and a tub-engaging head carried by the screw.

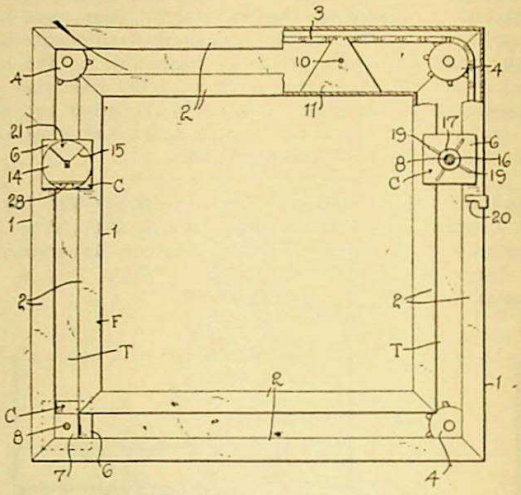
3. A washboard holder comprising a board-engaging member, a tub-engaging member, and means for connecting the board-engaging member to the tub-engaging member and adapted to engage the tub for holding the tub-engaging member on the tub.

1,204,134. CANDELABRUM. WILLIAM L. CONNOLLY, New York, N. Y. Filed Apr. 21, 1914, Serial No. 833,512. Renewed Sept. 29, 1916. Serial No. 122,930. (Cl. 67—25.)



A candelabrum comprising, in combination, a member in the form of a cross with its transverse arms hinged to opposite parts of the longitudinal arm so as to be relatively swung to and from right-angular positions, a boss on the underside of the member having a recess, a standard with a recessed member having therein an extensibly movable second member with a threaded end screwed in the recess of the boss, and a supporting bracket removably mounted on the recessed member of the standard.

1,204,135. CHANGEABLE EXHIBITOR. GEORGE W. COOK, Menomonie, Wis. Filed Jan. 26, 1916. Serial No. 74,407. (Cl. 40—30.)



1. A device of the character described comprising a frame provided with an endless track-way, a carrier coacting with said track-way, means for imparting movement to the carrier, a shaft projecting outwardly from the carrier, a disk rotatably mounted on the carrier, a second disk fixed to the shaft in advance of the first named disk, said second named disk having a portion cut out to afford a visual opening and means coacting with the movable disk for intermittently rotating the same.

2. A device of the character described comprising a frame provided with an endless track-way, a carrier coacting with said track-way, means for imparting movement to the carrier, a shaft projecting outwardly from the carrier, a disk rotatably mounted on the carrier, a second disk fixed to the shaft in advance of the first named disk, said second named disk having a portion cut out to afford a visual opening and means coacting with the movable disk for intermittently rotating the same, and means for normally maintaining the rotatable disk against rotation about the shaft.

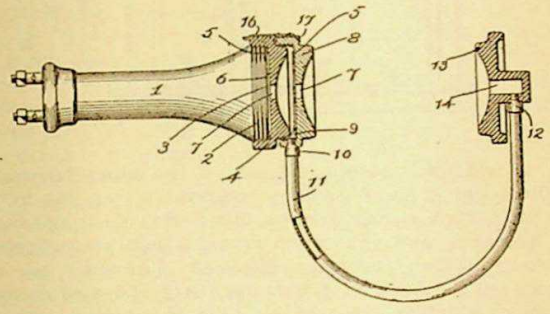
3. A device of the character described comprising a frame provided with a track-way, a carrier coacting with the track-way, means for imparting movement to the carrier, a shaft carried by the carrier and extending in advance thereof, a sleeve rotatably mounted upon the carrier, means for normally holding the sleeve against rotation, fingers radiating from the sleeve, a trip carried by the frame adapted to engage the fingers of the sleeve for partially rotating the sleeve, a disk carried by the outer end of the sleeve, and a second disk fixed to the shaft in advance of the sleeve and having a portion thereof cut out to afford a visual opening.

4. A device of the character described comprising a frame including angularly related members, each of said members being substantially U-shape in cross section and having their side walls provided with inturned flanges to afford a track-way, a carrier coacting with the track-way, a shaft supported by the carrier, a plate pivotally engaged with the inner end of the shaft and having a straight edge coacting with the inner wall of each of the members, an endless chain adapted to travel within the members, guide sprockets carried by the members at the corners of the track-way, said plate being operatively connected with the chain, the connection between the shaft and the plate being at a point on the plate spaced from the operative connection between the plate and the chain a distance equal to the radius of the sprockets.

5. A device of the character described comprising a frame including angularly related members, each of said members being substantially U-shape in cross section and

having their side walls provided with inturned flanges to afford a track-way, a carrier coacting with the track-way, a shaft supported by the carrier, a plate pivotally engaged with the inner end of the shaft and having a straight edge coacting with the inner wall of each of the members, an endless chain adapted to travel within the members, guide sprockets carried by the members at the corners of the track-way, said plate being operatively connected with the chain, the connection between the shaft and the plate being at a point on the plate spaced from the operative connection between the plate and the chain a distance equal to the radius of the sprockets, the carrier including plates overlying the opposite faces of the inturned flanges.

1,204,136. TELEPHONE APPLIANCE. JOHN L. CREVELING, New York, N. Y. Filed July 27, 1908. Serial No. 445,594. (Cl. 179—182.)



1. An attachment for a telephone receiver ear piece adapted to operatively engage the same, comprehending an attachment ear piece having a spring ring encircling and gripping the same provided with members adapted to engage the telephone receiver ear piece to detachably hold the attachment ear piece in operative relation to said receiver ear piece.

2. An attachment for telephone receivers comprising an ear piece, a spring ring encircling and gripping said ear piece, said ring being provided with members for operatively engaging a telephone receiver to hold said attachment ear piece in operative relation thereto.

3. The combination with a telephone receiver having an ear piece, of an attachment ear piece provided with engaging means whereby it is retained in operative relation with said receiver ear piece, said engaging means comprehending a spring ring encircling and gripping said attachment ear piece and having projecting members for engaging the telephone receiver ear piece to hold said ear pieces in operative relation with each other.

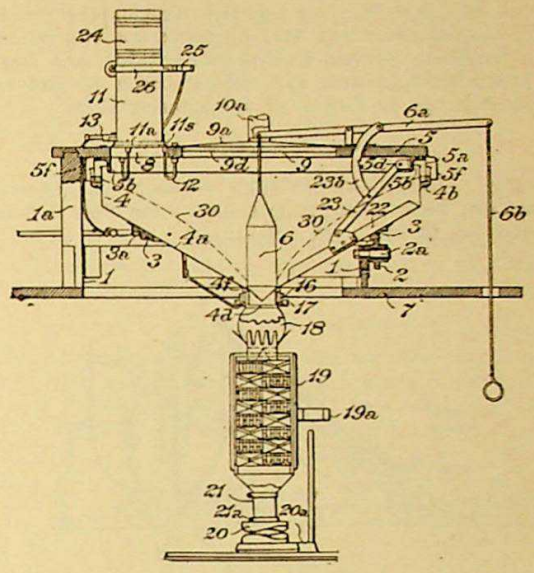
4. An attachment for a telephone receiver ear piece adapted to operatively engage the same, comprehending an attachment ear piece having a spring ring encircling and gripping the same, said ring being provided with members engaging said attachment ear piece to prevent lateral movement thereon, and also provided with members adapted to engage the telephone receiver ear piece to detachably hold the attachment ear piece in operative relation to said receiver ear piece.

5. An attachment for telephone receivers comprising an ear piece, a spring ring encircling and gripping said ear piece, said ring being provided with members for preventing lateral movement of said ear piece within said ring, and also provided with members for operatively engaging a telephone receiver to hold said attachment ear piece in operative relation thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,204,137. MANUFACTURE OF BLENDED POWDER COMPOUNDS. WILLIAM DALTON, Schenectady, N. Y. Filed July 18, 1916. Serial No. 109,888. (Cl. 83—73.)

1. The process of manufacture of blended powder compounds which consists in separately sifting a plurality of properly proportioned dry powdered ingredients upon a moving supporting surface, so as to deposit the powdered particles of the ingredients thereon, in successive pluralities of thin and intimately mixed layers of each of the several ingredients; thereafter breaking up the multiple layered deposit; and finally repeatedly relayering said deposit, so as to thoroughly blend the entire mixture.



2. The process of manufacture of blended powder compounds which consists in separately sifting and depositing a plurality of dry powdered ingredients upon a moving surface, and simultaneously spraying the ingredients with a liquid as they are being layered upon the moving surface, for the purpose of intimately and safely combining the ingredients without dangerous mechanical manipulation, and thoroughly saturating them with liquid, thereby forming a non-explosive mixture which can be safely molded into any desired form.

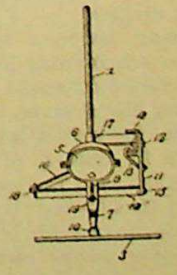
3. The combination, in a powder blending machine, of a frame; a rotary hopper supported thereon, and having a discharge outlet; a hopper cover; means for sifting powder into the hopper; and a liquid seal formed between the cover and the hopper to prevent undesired escape of powder therefrom.

4. The combination, in a powder blending machine, of a frame; a rotary hopper supported thereon, and having a discharge outlet; a hopper cover; means for sifting powder into the hopper; a stationary member formed around the discharge outlet; and a liquid seal formed on said member and around the outlet to prevent undesired escape of powder from said outlet.

5. The combination, in a powder blending machine, of a frame; a rotary hopper supported thereon, and having a discharge outlet; a hopper cover; means for sifting powder into the hopper; an annular trough formed around the hopper and adapted to contain a sealing liquid; and a downwardly projecting circular flange fastened to the cover and extending into the trough for the purpose of forming a seal with the liquid therein.

[Claims 6 and 7 not printed in the Gazette.]

1,204,138. STEERING-GEAR. WILLIAM F. DUBERT, Fulton, Iowa. Filed Jan. 17, 1916. Serial No. 72,581. (Cl. 74—79.)

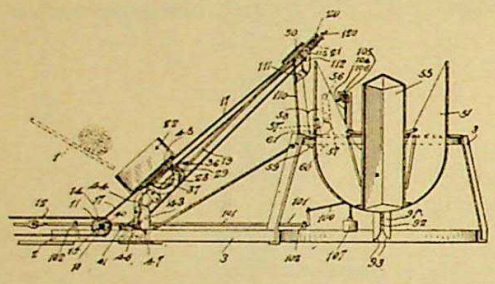


1. The combination with the steering shaft and steering rod of a vehicle, of an eccentric fast on the steering

shaft, a strap encircling said eccentric, and an arm on said strap terminally jointed to said steering rod and pivotally and slidably mounted between the ends thereof.

2. The combination with the steering shaft and steering rod of a vehicle, of an eccentric fast on the steering shaft, a strap encircling said eccentric, an arm on said strap terminally jointed to said steering rod, and means for producing a pivoted and sliding action of said arm as the eccentric is turned by the steering shaft.

1,204,139. GRAIN-SHOCKER. GEORGE A. DURANT, Swanson, Saskatchewan, Canada. Filed Dec. 6, 1915. Serial No. 65,394. (Cl. 56—121.)



1. In a shock forming device, a sheave carrying structure embodying a car structure, a hopper pivotally and hingedly carried by said car structure, and means for tipping said hopper into a delivering position at predetermined times.

2. In a shock forming device, a sheave receiving and shock forming pan, a car structure for carrying sheaves from a binder deck to said pan, said car structure embodying a truck structure, a hopper pivotally and hingedly connected to said truck structure, means controllable by the depositing of a sheave on said car structure for automatically moving the same into a delivering position adjacent to said pan.

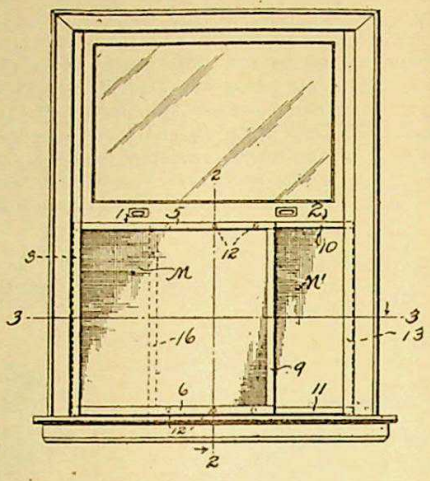
3. In a shock forming device, a sheave receiving and shock forming pan, a car structure for carrying sheaves from a binder deck to said pan, said car structure embodying a truck structure, a hopper pivotally and hingedly connected to said truck structure, means controllable by the depositing of a sheave on said car structure for automatically moving the same into a delivering position adjacent to said pan, and means for tipping said hopper for dumping a sheave therefrom when it is positioned adjacent to said pan.

4. In a shock forming device, a sheave receiving and shock forming pan, a car structure for carrying sheaves from a binder deck to said pan, said car structure embodying a truck structure, a hopper pivotally and hingedly connected to said truck structure, means controllable by the depositing of a sheave on said car structure for automatically moving the same into a delivering position adjacent to said pan, means for tipping said hopper for dumping a sheave therefrom when it is positioned adjacent to said pan, said pan being provided with a partition formed therein, and means for regulating the tipping of said hopper for alternately depositing sheaves upon the opposite sides of said divider.

5. In a shock formng device, a supporting frame, a sheave receiving and shock forming pan pivotally carried by said frame, means for holding said pan in a horizontal position while receiving the sheaves, means for releasing said last named means for permitting said pan to move into a vertical position for removal of a shock therefrom, and a plurality of tumbler rods carried by said pan, tines carried by said tumbler rods for insertion through said pan into the sheaves carried thereby for preventing accidental movement of the sheaves during movement of the pan from a horizontal to a vertical position.

[Claims 6 to 15 not printed in the Gazette.]

1,204,140. WINDOW-SCREEN. HAROLD A. ELDREDGE, Newburyport, Mass. Filed Jan. 5, 1916. Serial No. 70,486. (Cl. 156—38.)



1. A window screen construction including telescoping sections, one of said sections comprising a frame having top and bottom casing bars provided with slots and carrying a screen, and the other of said sections comprising a frame having reversely disposed channeled top and bottom bars slidable in the casing bars and also carrying a screen which is adapted to slidably overlap with the screen of the other section by working in the slots of the casing bars, and friction reducing balls between the channeled bars and casing bars.

2. An extensible window screen construction including slidable frame sections, one of said sections having hollow top and bottom casing bars provided with slots opening toward each other, and a screen carried by said section at one side of said slots, the other of said sections having reversely disposed channeled top and bottom bars, and also carrying a screen, and friction reducing means interposed between the channeled bars and the casing bars.

3. An extensible window screen construction including slidable frame sections, one of said sections having hollow top and bottom casing bars provided with slots opening toward each other, and a screen carried by said section at one side of said slots, the other of said sections having reversely disposed channeled top and bottom bars telescoping within said casing bars and also carrying a screen adapted to slide in the slots of the casing bars and slidably overlap with the screen carried thereby, and friction reducing balls interposed between the channeled bars and the casing bars.

1,204,141. PROCESS OF MAKING SULFURIC ANHYDRID AND CATALYZER THEREFOR. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Jan. 29, 1916. Serial No. 75,028. (Cl. 23—28.)

1. A catalyzer adapted for making sulfur trioxid from sulfur dioxid and air comprising active chromium material of a basic character weighted by an oxy-compound of an easily fusible heavy metal capable of absorbing sulfur dioxid.

2. A catalyzer adapted for making sulfur trioxid from sulfur dioxid and air comprising active chromium material weighted and stiffened by a compatible compound of an easily fusible heavy metal.

3. A catalyzer adapted for making sulfur trioxid from sulfur dioxid and air comprising voluminous chromium oxid and a compatible compound of an easily fusible heavy metal capable of absorbing sulfur dioxid.

4. A contact material comprising active voluminous chromium oxid material bonded by a compatible binding agent into a substantially permanent form, capable of yielding 80 to 95% conversion of sulfur dioxid to the trioxid.

5. A contact material comprising voluminous chromium oxid uncombined with, but bonded by an oxy-compound of a heavy metal.

[Claims 6 to 17 not printed in the Gazette.]

1,204,142. PROCESS OF MAKING SULFURIC ANHYDRID. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Dec. 6, 1915. Serial No. 65,285. (Cl. 23—1.)

1. The process of producing sulfuric anhydrid which comprises passing a mixture of sulfur dioxid and air into contact with catalytic material comprising an active basic compound of tin and voluminous free chromium oxid.

2. The process of producing sulfuric anhydrid which comprises passing a mixture of sulfur dioxid and air into contact with porous masses of catalytic material comprising an active basic compound of tin and voluminous free chromium oxid material.

3. The process of producing sulfuric anhydrid which comprises passing a mixture of sulfur dioxid and air into contact with catalytic material comprising tin oxid and voluminous active basic chromium material, the proportion of tin oxid being less than its combining equivalent with chromium to form tin chromate.

4. The process of producing sulfuric anhydrid which comprises passing a mixture of sulfur dioxid and air into contact with catalytic material comprising tin oxid and chromium oxid in non-equivalent proportions.

5. The process of producing sulfuric acid material which comprises subjecting sulfur dioxid in the presence of an oxidizing gas to the action of an oxidizing catalyst comprising tin oxid and chromium oxid of an active character; some portion at least of said stanniferous material being uncombined with said chromium material.

[Claims 6 to 8 not printed in the Gazette.]

1,204,143. CONTACT MATERIAL. CARLETON ELLIS, Montclair, and HARRY M. WEBER, East Orange, N. J., assignors to Ellis-Foster Company, a Corporation of New Jersey. Filed Dec. 17, 1915. Serial No. 67,357. (Cl. 23—28.)

1. A catalyzer adapted for use in the manufacture of sulfuric acid by the contact process which comprises an intimate mixture of a chromium compound and an activating agent, in the form of a porous body.

2. The process of making catalytic material adapted for use in the manufacture of sulfuric acid by the contact process which comprises incorporating ammonium bichromate with tin chlorid, in exposing the moist product of the reaction to heat to intumesce the material, removing ammonium chlorid by further heating and in baking the product to form granular porous masses of good crushing strength.

3. A process of making a catalyst which comprises subjecting a material containing tin and chromium, in the presence of an organic material, to sufficient heat to produce a rigid intumesced solid material, and comminuting the same to a granular mass.

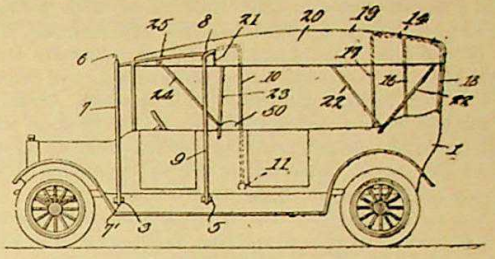
4. A process of making a catalyst, which comprises intumescing a mixture comprising an oxy-compound of chromium and a tin-bearing substance, and granulating the product.

5. A contact material comprising a porous structure in the form of granules comprising voluminous chromium oxid uncombined with but bonded by an oxy compound of a heavy metal.

[Claims 6 to 11 not printed in the Gazette.]

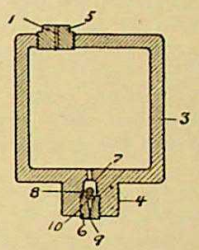
1,204,144. SAFETY APPLIANCE. JAMES WILLIAM ELLIS, Bassett, Nebr. Filed Nov. 24, 1915. Serial No. 63,248. (Cl. 21—90.)

In a device of the class described, a vehicle body including a chassis; forward and rear bars assembled with the chassis; a forward arch having its ends connected with the forward bar; a pair of rear arches including outer arms connected with the rear bar, and inner arms; a vehicle supported foot piece uniting the inner arms adjacent their lower ends; a transverse brace uniting the



inner arms intermediate their upper and lower ends; and longitudinal braces uniting the forward and rear arches in their upper portions.

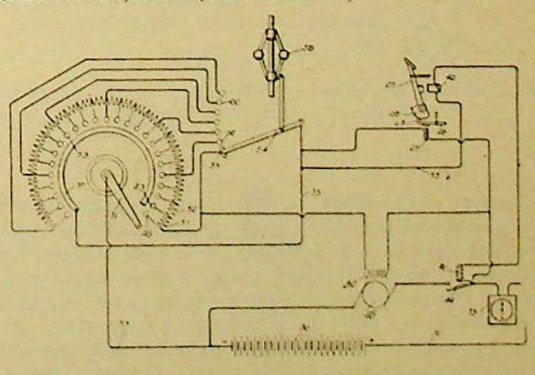
1,204,145. LUBRICATOR. JOHN W. EVISTON, Milwaukee, Wis., assignor to The United States Graphite Company, Saginaw, Mich., a Corporation of Michigan. Filed Oct. 19, 1915. Serial No. 56,767. (Cl. 184—59.)



1. In a graphite-feeding lubricator, the combination of a chamber, an apertured filling plug, a vertically movable ball valve beneath the chamber, an inverted apertured valve seat above said ball valve and communicating with the interior of said chamber, and an apertured bushing, said bushing received in a recess formed in the bottom of said chamber, and adapted to retain said ball.

2. In a graphite-feeding lubricator, the combination of a chamber formed with a threaded boss at its bottom, an apertured filling plug, a vertically movable ball valve within said boss, an inverted apertured valve seat in said boss and located above said ball valve, said seat communicating with the interior of said chamber, an apertured bushing received in a recess formed in said boss, said bushing supporting said ball to hold it away from the aperture of said bushing, for the purposes set forth.

1,204,146. AUTOMOBILE. ROLAND S. FEND, Chicago, Ill., assignor to Woods Motor Vehicle Company, Chicago, Ill., a Corporation of Illinois. Filed June 26, 1915. Serial No. 36,592. (Cl. 171—315.)



1. In a motor vehicle, the combination with a storage battery of a shunt wound electric dynamo for propelling the vehicle, a hand operated rheostat for including and excluding resistance in series with the shunt field of the dynamo, and means for preventing the inclusion of resistance in circuit with the field of said dynamo comprising an

automatically operating contact device responsive to the speed of the dynamo.

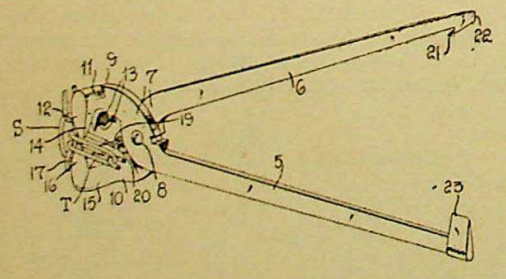
2. In a motor vehicle, the combination with a storage battery of a dynamo, a shunt field for said dynamo, a plurality of resistance units and means for manually including said units in series with said shunt field, and centrifugally operated means responsive to the speed of the dynamo for preventing the manual inclusion of said resistance units in the field circuit unless the dynamo is being propelled at a speed satisfactory for the inclusion of such resistance units in said shunt field circuit.

3. In a motor vehicle, the combination with a storage battery of a dynamo for propelling the vehicle and charging said battery, a shunt field winding for said dynamo, a governor mechanically driven from the dynamo shaft and an external resistance comprising a plurality of sections, and means under the control of said governor for including said sections, one at a time, in series with the dynamo shunt field as the speed of the dynamo increases.

4. In a motor driven vehicle, the combination with a storage battery of a dynamo driven thereby for propelling the vehicle, an engine for propelling the dynamo for charging said storage battery, a hand operated rheostat for controlling the field magnetization of said dynamo, a mechanically operated device for preventing a too rapid decrease in the field magnetization of said dynamo, said mechanically operated device being so adjusted that under the normal operation of the motor vehicle it will not interfere with a further gradual decrease in the field magnetization of the dynamo through the operation of the manual device.

5. In a motor vehicle the combination with a storage battery of a dynamo driven thereby for propelling a vehicle, an internal combustion engine for propelling the dynamo for charging the storage battery and for assisting in driving the vehicle, a ratio changing mechanism between the dynamo and the driven axle of the vehicle whereby different speed ratios may be established between the dynamo and the driven axle, a hand operated rheostat for controlling the field magnetization of said dynamo, a governor depending upon the speed of the dynamo shaft and arranged to prevent the too rapid inclusion of resistance in the field circuit of the dynamo, said governor being so adjusted that under all of the different speed relations between the dynamo and the driven axle of the motor vehicle the governor will be effective only during acceleration of the vehicle.

1,204,147. TOOL. JAMES W. FERGUSON, Jacobs Creek, Pa. Filed Apr. 12, 1916. Serial No. 90,709. (Cl. 81—15.)



1. A tool of the character described including jaws pivotally connected together at one of their ends for relative movement, each of said jaws having a wedge-shaped finger integrally formed therewith, said fingers being spaced from the corresponding side faces of the jaws, one of said fingers having its outer face beveled and the other of the fingers having its inner face opposed to the side face of the jaw and beveled in parallel relation to the beveled face of the first finger.

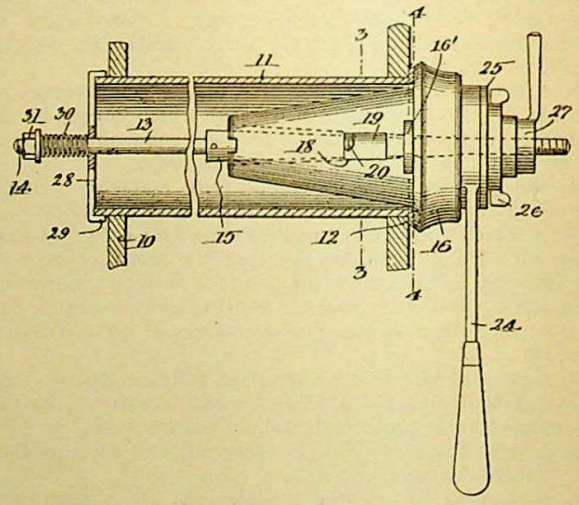
2. A tool of the character described including jaws pivotally connected together at one of their ends, one of said jaws being provided in its other end with concave gripping edges for engagement upon the parallel portions of a double-hook link, said gripping edges being disposed in parallel relation to the pivot and the other of the jaws having channels formed therein to provide seats to receive the hook bills of the link.

3. A tool of the character described including intersecting pivotally connected handle members having opposed jaws on one of their ends, one of said jaws being provided upon its inner face and at its outer end with notches having transverse gripping edges to engage the parallel portions of a chain link and the other of said jaws having channels formed therein to receive hooked terminals on the link, and a laterally offset finger formed upon one side of one jaw and projecting toward the other jaw and adapted for engagement through the link.

4. A tool of the character described including intersecting pivotally connected handle members having opposed jaws on one of their ends, one of said jaws being provided upon its inner face and at its outer end with notches to receive the parallel portions of a chain link and the other of said jaws having channels formed therein to receive hooked terminals on the link, and a laterally offset finger formed upon one side of one jaw and projecting toward the other jaw and adapted for engagement through the link, said jaws being provided on their inner faces and intermediate of their ends with opposed flanges to engage the hooked terminals of the chain link.

5. A repairing tool for anti-skidding tire chains including pivotally connected, relatively movable jaws, one of said jaws being formed with an inwardly projecting end portion having gripping edges for engagement upon the parallel portions of the hooked ends of a link, the opposed face of the other jaw having channels formed therein to receive the hook bills, the inner opposed faces of the jaws being provided with stop abutments for engagement by the hooks to prevent longitudinal movement of the same between the jaws when the latter are closed.

1,204,148. FLUE OR TUBE CUTTER. WILLIAM FLANAGAN, Leland, Miss. Filed Feb. 27, 1915. Serial No. 11,023. (Cl. 81—195.)



1. In combination with a bolt, of a wedging member securely mounted upon the bolt, a hub surrounding the wedge member and having a tapering bore receiving the wedge and also provided with a transverse opening intersecting said bore, a cross pin loosely supported on the bolt and adapted to engage one end of a tube while the hub engages the other end thereof, a spring surrounding the bolt and acting against the cross piece, a nut adjustably engaged on the bolt and working against the spring, a nut engaged on the end of the wedging member and working against the hub, means for rotating the hub, and cutters within the transverse opening and acted upon by the wedge.

2. The combination with a bolt, of a wedging member securely mounted upon the bolt, a hub surrounding the wedge member and having a tapering bore receiving the wedge and also provided with a transverse opening intersecting said bore, a cross piece loosely supported on the bolt

and adapted to engage one end of a tube while the hub engages the other end thereof, a spring surrounding the bolt and acting against the cross piece, a nut adjustably engaged on the bolt and working against the spring, a nut engaged on the end of the wedging member and working against the hub, cutters within the transverse opening and acted upon by the wedge, and a lever connected with the hub for rotating the same.

1,204,149. WATERPROOFING COMPOSITION. OTTO EINAR GELERTSEN, Westfield, N. J., assignor to Greenfield Paper Bottle Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 28, 1915. Serial No. 58,370. (Cl. 134—15.)

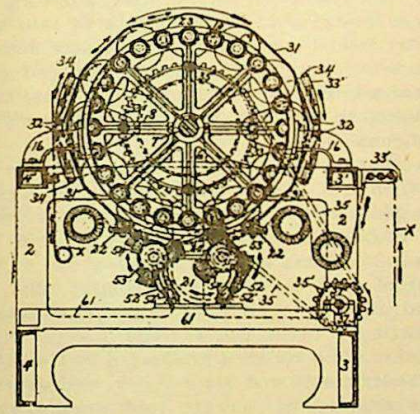
1. A waterproofing composition comprising in combination resin and hydrocarbon wax, the latter up to but not exceeding 25%, said composition also comprising carnauba wax from ½ to 1%.

2. A waterproofing composition comprising approximately 75% of resin and 25% of paraffin.

3. A waterproofing composition comprising 75% or over of resin, substantially the remainder of the composition being hydrocarbon wax.

4. A waterproofing composition comprising 75% or over of resin, substantially the remainder of the composition being a hydrocarbon wax, the composition also comprising a small percentage of carnauba wax.

1,204,150. PLANETARY CLOTH-NAPPING MACHINE. DAVID GESSNER, Worcester, Mass. Filed Dec. 7, 1912. Serial No. 735,367. (Cl. 26—19.)



1. A napping-roll comprising metallic tubular sections, and a rigid tubular coupling and stiffening member having its ends housed within said sections and extending longitudinally thereof a sufficient distance to provide rigidity to the roll and resist ballooning of the same, the portions of the said member within said roll sections being rigidly united thereto by a brazed joint forming an integral structure.

2. A napping-roll comprising metallic tubular sections and a rigid tubular coupling and stiffening member having its opposite ends housed within said sections and extending longitudinally thereof a sufficient distance to resist ballooning of the roll, said member having a radial flange projecting laterally beyond the ends of the roll sections.

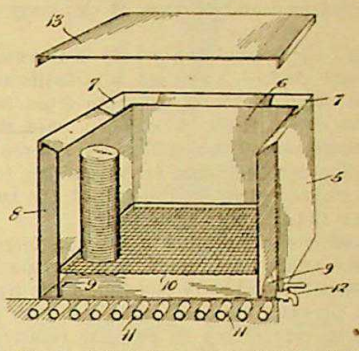
3. In combination, drum heads having circumferentially arranged bearing seats, napping-rolls having journals seated in said seats, retaining rings surrounding the heads and closing said seats, and external bearings upon which said rings travel.

4. In combination, a drum head having circumferentially arranged bearing seats, napping-rolls having journals seated in said seats, a retaining ring surrounding the head and overlying the portion of the journals in said bearing seats, and means external of said ring for supporting the same.

5. In combination, drum heads having circumferentially arranged bearing-seats, napping-rolls having journals seated in said seats, retaining-rings surrounding the heads and closing said seats, and external roller-bearings upon which said rings travel.

[Claims 6 to 18 not printed in the Gazette.]

1,204,151. METHOD OF TREATING COATED MATERIAL. GEORGE A. GILBERT and MATTHEW L. DAUGHERTY, Norwood, Ohio. Filed Apr. 3, 1916. Serial No. 88,466. (Cl. 34—24.)



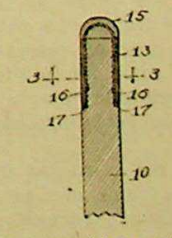
1. The method of treating material coated with solids dissolved in benzol or the like, which consists in heating said material, then transferring it to a closed receptacle and utilizing the heat of the heated material to cause a circulation in said receptacle for warm drying and condensation.

2. The method of treating material coated with solids dissolved in benzol or the like, which consists in rapidly heating said material, then transferring it to a closed receptacle, applying a cooling medium to the receptacle, and utilizing the heat of the heated material to cause a circulation in said receptacle for warm drying and condensation.

3. The method of treating material coated with solids dissolved in benzol or the like, which consists in heating the material to a temperature between one hundred and fifty and one hundred and seventy degrees Fahrenheit, transferring said material to a closed receptacle, applying a cooling medium of temperatures between fifty and seventy degrees Fahrenheit to said receptacle and utilizing the heat of the heated material to cause a circulation in said receptacle for warm drying of the parts and condensation of the benzols.

4. The method of treating tin parts coated with sealing fluid dissolved in benzol, which consists in quickly heating said parts so as to bring them to a temperature between one hundred and fifty and one hundred and seventy degrees Fahrenheit without driving off the solvent, placing said tin parts in a closed receptacle, applying a mild cooling medium to said receptacle, and utilizing the heat of the heated parts to cause a circulation in said receptacle for warm drying and condensation.

1,204,152. BILLIARD-CUE. JOHN H. GOODELL, Marseilles, Ill. Filed Jan. 7, 1916. Serial No. 70,722. (Cl. 46—9.)



1. A billiard cue comprising a body having a reduced end portion provided with flat faces at diametrically opposite sides thereof, a ferrule surrounding said reduced end portion, a tip at the extreme end of said portion, a metallic strap passing through an opening in said tip and having its end portions projecting in parallel relation from

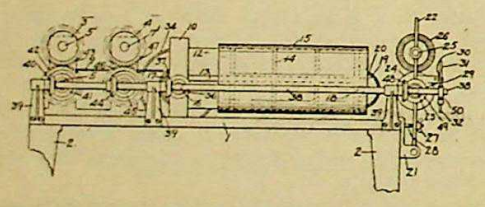
the inner face of said tip and lying within the ferrule and along the said flat faces of said reduced portion of the body, the extreme free ends of said strap being bent outwardly, and said ferrule having notches in its ends to receive said outwardly bent ends.

2. A billiard cue comprising a body having a reduced end portion, a ferrule surrounding said end portion, a non-metallic tip at the extreme end of said portion, and a metallic strap passed through a hole in the tip with the mid-portion of the strap occupying said hole, the end portions of the strap extending in parallel relation along opposite sides of the reduced end portion of the body within said ferrule.

3. A billiard cue comprising a body, a ferrule adapted to fit over one end thereof, a cue tip, a metallic strap formed of a straight strip of metal separate from said tip and secured at its mid-portion to said tip, said strap having its end portions positioned within said ferrule at opposite sides of the cue body, the ferrule acting to clamp the end portions of said strap to the end of the cue body and thereby secure the cue tip to the body.

4. A billiard cue comprising a body, a ferrule adapted to fit upon one end of said body, said ferrule having diametrically opposite notches in one end, a cue tip, a metallic strap passed through an opening in said tip and having its end portions projecting in parallel relation from the inner face of said tip and lying within said ferrule, the extreme ends of the strap being bent outwardly to engage in the notches in the ferrule, the ferrule acting to bind the strap to the cue body for securing the cue tip thereto, and the ferrule, tip and strap being removable as a unit from the body to permit the substitution of another tip by disengagement of the end portions of the strap from the ferrule.

1,204,153. MACHINE FOR MANUFACTURING SANITARY NAPKINS. GEORGE H. HARDMAN, Fall River, Mass., assignor of one-half to Frank S. Brundage, Fall River, Mass. Filed Oct. 19, 1912. Serial No. 726,683. (Cl. 223—15.)



1. In a machine of the character described, the combination with a suitable frame, of a support for a tubular fabric casing and a conveyer extending within said tubular fabric casing.

2. In a machine of the character described, the combination with a suitable frame, of a support for a tubular fabric casing and a conveyer mounted to rotate within said support and casing.

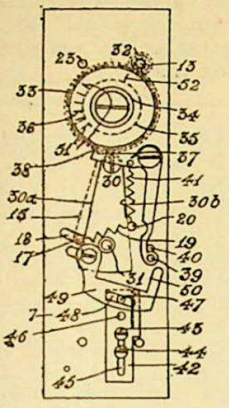
3. In a machine of the character described, the combination with a suitable frame, of a pair of intermittent feed rolls, a pair of constant feed rolls, a tube, an endless belt rotating within said tube, and a pair of feed rolls adjacent the outer end of said tube.

4. In a machine of the character described, the combination with a suitable frame, of a pair of intermittently rotating feed rolls, a pair of constantly rotating feed rolls, a tube supported upon its interior, an endless belt adapted to rotate within said tube, a pair of feed rolls adjacent the outer end of said tube, and a knife adjacent said feed rolls.

5. In a machine of the character described, the combination with a suitable frame, of a pair of intermittently rotating feed rolls, a pair of constantly rotating feed rolls adjacent thereto, a tube supported upon its interior, an endless belt mounted to rotate within said tube, a feed roll and coöperating feed brush adjacent the outer end of said tube, and a fixed and movable knife member adjacent said last mentioned feed roll.

[Claims 6 to 8 not printed in the Gazette.]

1,204,154. FOCAL-PLANE SHUTTER AND ROLLER-BLIND SHUTTER. EDITH HORA, Wandsworth, England. Filed Oct. 7, 1915. Serial No. 54,647. (Cl. 95—57.)



1. In a shutter of the kind referred to, the combination of two blinds having slits therein normally out of register, a plain roller and a spring roller for each blind, a geared connection between the two plain rollers, a spring controlled lever adapted to move one of said plain rollers out of gear with the other plain roller, a second spring controlled lever adapted to prevent motion of the firstly mentioned plain roller when moved out of gear with the other plain roller, a graduated setting disk geared to the secondly mentioned plain roller, a stop carried by said graduated setting disk, a spring controlled pivoted member movable into the path of said stop, shutter releasing means adapted to operate said second spring controlled lever, a movable member adapted to connect said pivoted member to said shutter releasing means, and means adapted to move such movable member to make or break said connection.

2. In a shutter of the kind referred to, the combination of two blinds, having slits therein normally out of register, a plain roller and a spring roller for each blind, a geared connection between the two plain rollers, a spring controlled lever adapted to move one of said plain rollers out of gear with the other plain roller, a second spring controlled lever adapted to prevent motion of the firstly mentioned plain roller when moved out of gear with the other plain roller, a graduated setting disk geared to the secondly mentioned plain roller, and shutter releasing means adapted to operate said second spring controlled lever.

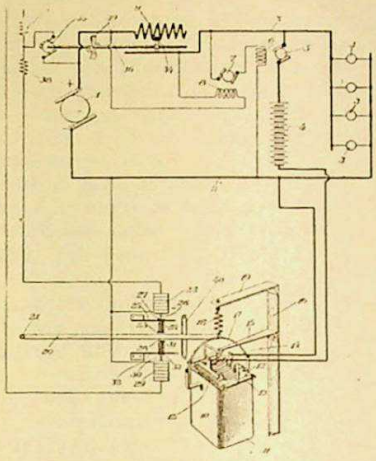
1,204,155. ELECTRICAL SYSTEM OF DISTRIBUTION. ALBERT S. HUBBARD, Belleville, N. J., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Jan. 25, 1910. Serial No. 539,920. (Cl. 171—310.)

1. In an electrical system of distribution, a distribution circuit, a compensatory storage battery in operative relation thereto, means for regulating the charge and discharge of the battery responsive to variations in the electrical condition of the system, and means responsive to variations in the weight of the liquid of the cells of said battery for further regulating the battery action.

2. In an electrical system of distribution, a distribution circuit, a compensatory storage battery in operative relation thereto, means for regulating the charge and discharge of the battery responsive to variations in the electrical condition of the system, and means responsive to variations in the weight of the liquid of one of the cells of said battery, said means being arranged to restore the battery to a predetermined condition of charge.

3. In an electrical system of distribution, a source of electrical energy, a distribution circuit and its load fed thereby, a compensatory storage battery operatively related thereto, means for controlling the division of load between the source and the battery responsive to certain variations in the electrical condition of the system, and

means for regulating the action of said controlling means responsive to variations in the weight of the liquid of one of the cells of said battery.

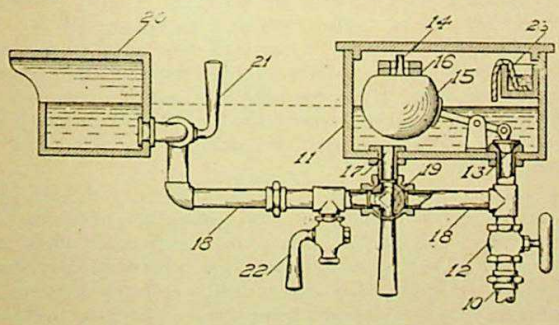


4. In an electrical system of distribution, a source of electrical energy, a distribution circuit and its load fed thereby, a compensatory storage battery operatively related thereto, means for controlling the division of load between the source and the battery responsive to certain variations in the electrical condition of the system, and means acting to cause the battery to return substantially to a predetermined condition of state of charge, responsive to variations in the weight of the liquid in one of the cells of said battery.

5. In an electrical system of distribution, a source of electrical energy, a distribution circuit and its load fed thereby, a compensatory storage battery operatively related thereto, means for controlling the division of load between the source and the battery responsive to certain variations in the electrical condition of the system, and slower acting means for cutting down the action of said controlling means responsive to variations in the weight of the liquid in one of the cells of said battery.

[Claims 6 to 15 not printed in the Gazette.]

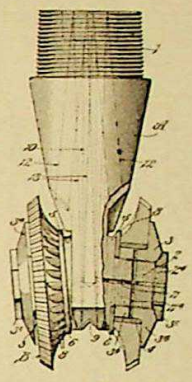
1,204,156. WATER-DISTRIBUTING SYSTEM. GEORGE M. HUBBELL, Los Gatos, Cal. Filed July 6, 1915. Serial No. 38,320. (Cl. 137—68.)



A water distributing system comprising a main supply tank, a main supply pipe communicating with said tank, an automatic valve for said pipe, means for controlling the operation of said valve when more or less water is being used, an outlet pipe also communicating with the main supply tank, a pipe connecting said main supply and outlet pipes, a three way valve located at the juncture of the connecting and outlet pipes, a cut-off valve and a drain cock located in said connecting pipe and an open trough swiveled to said connecting pipe.

1,204,157. DISK DRILL. HOWARD R. HUGHES, Houston, Tex., assignor to Sharp-Hughes Tool Company, Houston, Tex., a Corporation of Texas. Filed Feb. 4, 1915. Serial No. 6,124. (Cl. 255—71.)

1. A disk drill, comprising a head, approximately disk-shaped cutters arranged in an upright position on the outer surface of said head and provided with cutting edges that act on the material on the side wall of the hole, and cutting surfaces on the inner sides of said cutters that act on the side of the core at the center of the hole and thus progressively destroy said core and assist said cutters to turn on their axes.



2. A disk drill, comprising a head, substantially disk-shaped cutters arranged in an upright position on the outer side of said head and provided with cutting edges that scrape off the material from the side wall of the hole when the head is rotated, said cutters being offset with relation to each other or arranged with their axes of rotation staggered slightly so that the rear edge portions of said cutters will not drag against the side wall of the hole, a stationary cutting device in the lower end face of the head arranged between said cutters and extending substantially parallel to same, and radially-disposed cutting edges on the inner sides of the cutters that disintegrate the material at the bottom of the hole and also assist the cutters to turn on their axes.

3. A disk drill, comprising a head, substantially disk-shaped cutters arranged in an upright position on the outer side of said head and provided on their edge portions with teeth, radially disposed cutting teeth on the inner sides of said cutters, and a stationary cutting device in the lower end face of the head arranged between said cutters and extending substantially parallel to same.

4. A disk drill, comprising a head provided adjacent its lower end with integral, laterally projecting spindles that are offset or staggered slightly with relation to each other, substantially disk-shaped cutters rotatably mounted on said spindles and provided with cutting edges that shear off the material from the side wall of the hole when the head is rotated, radially-disposed cutting edges on the inner sides of said cutters that disintegrate the material at the bottom of the hole, and a recess formed at the lower end face of the head and extending parallel to said cutters for disintegrating the material at the center of the bottom of the hole.

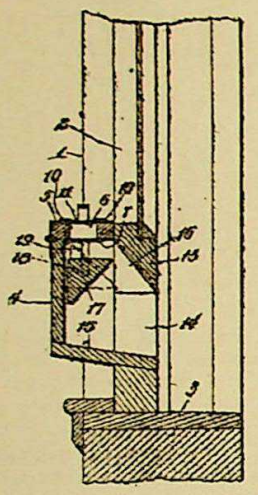
5. A disk drill, comprising a head, approximately disk-shaped cutters arranged in an upright position on the outside of said head, and means for discharging jets of flushing water downwardly from the lower end face of the head between said cutters, at points below the axes of said cutters and also downwardly against the inner sides of said cutters at points above the axes on which they revolve.

[Claims 6 to 16 not printed in the Gazette.]

1,204,158. WINDOW-VENTILATOR. ISAAC B. INGLE, Bloomington, Ill. Filed June 30, 1915. Serial No. 37,213. (Cl. 98—31.)

1. A window ventilator comprising a board or rail having an air inlet opening extending therethrough, a casing upon the inner side of said rail in communication with said opening having inlets above the plane of the opening, and means associated with the upper ends of the inlets for controlling the same, and an angular bar journaled in said casing and removable through the upper end thereof for regulating the passage of air to said openings.

2. A ventilator comprising a board or rail having an air inlet opening, a casing upon one side of said rail having an open top above the level of the air inlet opening in the rail, a lid or cover for closing said top, said lid or cover being provided with a ventilation opening, a guideway, a damper movable in said guideway and governing said opening, and an angular bar journaled in said casing and removable through the upper end thereof for regulating the passage of air to said openings.

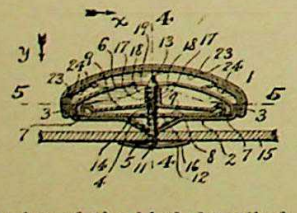


3. A ventilator comprising a board or rail having an air inlet opening, a casing upon one side of said board or rail and having an air passage in its top above the level of the said inlet opening, the top wall of said opening being arranged to slope upwardly and inwardly toward said passage, and a triangular-shaped block journaled in said casing to control the passage of air to said openings.

4. A ventilator including a board or rail having an air inlet opening, a casing on one side of said rail having an inlet at its top above the level of the top of said opening, the bottom walls of the rail opening and casing being outwardly and downwardly sloped and the top wall of the opening being upwardly and inwardly sloped, means for controlling the admission of air through the inlet at the top of the casing, the end wall of said casing having slots open at one end thereof, and an angular bar journaled in said slots for regulating the passage of air through the casing to the openings.

5. A ventilator including a bar or rail having an opening extending therethrough, a casing upon one side of said rail and communicating with said opening, said casing having an open top above the level of the opening and provided in its end walls with grooves, a lid for closing the open top of the casing and provided with a ventilation passage, a damper for closing said passage, and a triangular bar having reduced projections adapted to engage said grooves, said bar being removably and pivotally supported in the passage, whereby the bar may be removed or adjusted to different positions to vary the size of the passage.

1,204,159. RELEASABLE SELF-FASTENING BUTTON. EDWARD J. JAFFE and ELIAS JAFFE, New York, N. Y. Filed Mar. 1, 1916. Serial No. 81,348. (Cl. 24—108.)



1. In a device of the kind described, a back-plate having a centrally disposed opening therein, a spring-plate supported upon said back-plate having an opening registered with said opening of said back-plate, opposite ends of said spring-plate being doubled upon themselves to provide upwardly inclined spring-arms the free ends of which are opposed to each other and slightly separated, a fastening shank having an anchor head at one end and a piercing point at its opposite end, said fastening shank having a plurality of annular transverse grooves formed in its body, said shank being adapted to be passed between said opposed ends of said spring-arms so as to be engaged thereby, upwardly extending lips connected with the free ends of said spring-arms so as to be opposed one to the other and between which a releasing tool may be thrust to separate the opposed ends of said spring-arms to disengage the same from said fastening shank, said back-plate and said spring-plate being provided with registered openings located beneath said lips through which a releasing tool may be passed.

2. In a releasable self-fastening button, a back-plate having a centrally disposed entrance opening, a spring-plate supported upon said back-plate having an opening therethrough registered with said entrance opening, opposite ends of said spring-plate being doubled upon themselves to provide upwardly inclined spring-arms the free ends of which are opposed to each other and slightly separated, a fastening shank having annular grooves in its body adapted to be engaged and held against withdrawal by said spring-arms when passed upwardly between said opposed free ends of the latter, and said back-plate and said spring-plate having additional registered openings located beneath and in line with said opposed ends of said spring-arms through which a releasing tool may be passed upwardly between said opposed ends of said spring-arms to separate the same and thereby release the same from holding engagement with said fastening shank to permit the withdrawal of the latter.

3. In a releasable self-fastening button, a back-plate having a centrally disposed offset shoulder provided with an entrance opening, a spring-plate supported upon said back-plate having an opening therethrough registered with said entrance opening, opposite ends of said spring-plate being doubled upon themselves to provide upwardly inclined spring-arms the free ends of which are opposed to each other and slightly separated, upwardly extending vertical lips connected with the opposed free ends of said spring-arms, opposed gripping-jaws formed in said lips, a fastening-shank having an anchor head at one end and a piercing point at its opposite end, said fastening shank having a roughened surface, said gripping surfaces of said gripping-jaws having a correspondingly roughened surface, said shank being adapted to be passed between said gripping-jaws, said back-plate and said spring-plate being provided with registered openings located beneath and in line with said opposed lips for the purposes set forth, and an arched cover-shell having a centrally disposed opening extending over said spring-arms and secured to said back-plate.

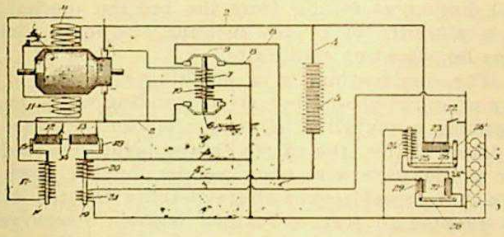
4. In a releasable self-fastening button, a back-plate having a centrally disposed offset shoulder provided with an entrance opening, a spring-plate supported upon said back-plate having an opening therethrough registered with said entrance opening opposite ends of said spring-plate being doubled upon themselves to provide upwardly inclined spring-arms the free ends of which are opposed to each other and slightly separated, upwardly extending vertical lips connected with the opposed free ends of said spring-arms, opposed gripping-jaws formed in said lips, a fastening-shank having an anchor head at one end and a piercing point at its opposite end, said fastening shank having a roughened surface, said gripping surfaces of said gripping-jaws having a correspondingly roughened surface, said shank being adapted to be passed between said gripping-jaws, said back-plate and said spring-plate being provided with registered openings located beneath and in line with said opposed lips for the purposes set forth, an arched cover-shell having a centrally disposed opening extending over said spring-arms and secured to said back-plate, and a button-face member secured to said back-plate.

5. In a releasable self-fastening button, a back-plate having a centrally disposed offset shoulder provided with

an entrance opening, a spring-plate supported upon said back-plate having an opening therethrough registered with said entrance opening, opposite ends of said spring-plate being doubled upon themselves to provide upwardly inclined spring-arms the free ends of which are opposed to each other and slightly separated, upwardly extending vertical lips connected with the opposed free ends of said spring-arms, opposed gripping-jaws formed in said lips, a fastening-shank having an anchor head at one end and a piercing point at its opposite end, said fastening shank having a plurality of annular transverse grooves formed in its body, said gripping-jaws being provided on their gripping surfaces with a plurality of corresponding transverse annular teeth, said shank being adapted to be passed between said gripping jaws, and said back-plate and said spring-plate being provided with registered openings located beneath and in line with said opposed lips for the purposes set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,204,160. ELECTRICAL SYSTEM OF DISTRIBUTION. JOHN W. JEPSON, Depew, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Jan. 25, 1910. Serial No. 539,917. (Cl. 171—313.)



1. In an electrical system of distribution, a main generator, a work circuit and storage battery arranged to be supplied thereby, regulating apparatus for regulating the voltage of the generator, a coil for controlling said regulating apparatus, said coil being serially connected between the generator and battery, and a coil arranged to be brought into action upon the connecting up of the work circuit to the generator to aid said first mentioned coil.

2. In an electrical system of distribution, a main generator, a work circuit and storage battery arranged to be supplied thereby, regulating apparatus for regulating the voltage of the generator, a coil for controlling said apparatus responsive to current changes, and a coil arranged to be brought into action upon the connecting up of the work circuit to the generator, to aid said first mentioned coil and prevent the generator from becoming overloaded.

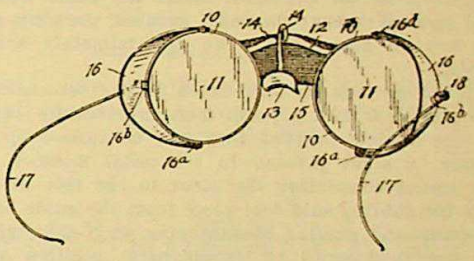
3. In an electrical system of distribution, a main generator, a work circuit and storage battery arranged to be supplied thereby, rheostatic apparatus for regulating the voltage of the generator, a coil responsive to battery current variations for regulating said apparatus to maintain a substantially constant charging current, and a coil arranged to be brought into operation to aid said first mentioned coil upon the connecting up of the work circuit to the generator, to cut down the charging current and prevent the generator from becoming overloaded.

4. In an electrical system of distribution, the combination of a main generator, a work circuit and battery connected to be supplied thereby, rheostatic apparatus for regulating the field of the generator to regulate its voltage, a coil serially connected between the generator and battery for regulating said apparatus, and a coil arranged to be brought into operation to aid said current coil upon the connecting up of the work circuit to the generator and battery, said second mentioned coil being connected across the work circuit.

5. In an electrical system of distribution, the combination of a main generator, a work circuit and battery connected to be supplied thereby, rheostatic apparatus in the field of the main generator for regulating the voltage thereof, two electro-magnets for independently regulating said apparatus, one of said electro-magnets operating responsive to changes in battery current to maintain a substantially constant charging current, and the other of said electro-magnets being connected responsive to voltage changes of the generator and arranged to be brought into operation to regulate the voltage of the generator when the battery has reached a predetermined condition of charge, and a coil arranged to be brought into action to aid said current electro-magnet to decrease the battery charging current upon the connecting up of the work circuit with the battery and generator.

[Claims 6 to 17 not printed in the Gazette.]

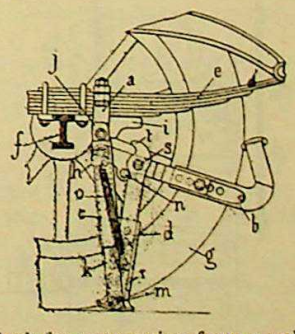
1,204,161. SPECTACLES. FREDERICK W. KING, Cleveland, Ohio. Filed June 30, 1914. Serial No. 848,303. (Cl. 2—149.)



1. In a spectacle construction, a pair of eye-wires, a flexible bridge rigidly secured at its ends to the eye-wires and spacing the same, and a flexible shield extending across the space between the eye-wires and having its end joined to the respective eye-wires.

2. In a spectacle construction, a pair of spaced lenses and metallic rims therefor, a flexible bridge member connecting the rims and rigidly secured thereto, whereby the distance between the lenses may be adjusted by flexing the bridge member, a nose piece disposed below the bridge member, and a flexible post directly connecting the nose piece to the bridge member and including a loop extending above the bridge member, the lenses being so spaced as to permit the nose piece to be located between them.

1,204,162. LIFTING-JACK. XAVIER KIRSTAETTER, Basel, Switzerland. Filed July 30, 1915. Serial No. 42,823. (Cl. 254—86.)



1. A lifting jack for suspension from a vehicle comprising a guide bar and a pedal member pivotally supported from the vehicle so that they can be turned up out of the way, a strut pivoted to the pedal member, a foot piece, means connecting the strut to the foot piece and means for guiding said foot piece from the guide bar, said connecting and guiding means being such that when the guide bar is dropped to its operative position and the pedal is operated, the vehicle is lifted.

2. A lifting jack for suspension from a vehicle, comprising a guide bar and pedal member pivotally supported from the vehicle, a stop at the upper end of the guide bar, a fixed support on the vehicle, said support coöperating with the stop to limit the movement of the guide bar, a strut pivoted to the pedal member, a foot piece, means con-

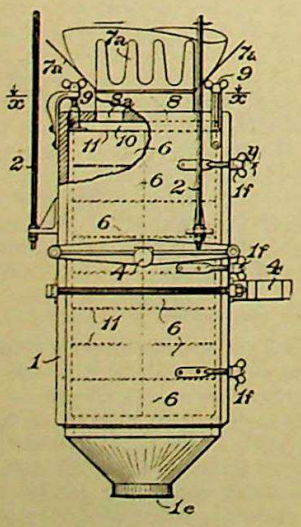
necting the strut to the foot piece, means for guiding said foot piece from the guide bar, a nose on the strut, and a projection on the pedal member, said nose and projection being adapted to limit the movement of the pedal member and strut beyond the straight line position on the operation of the pedal member.

3. A lifting jack for suspension from a vehicle, comprising a guide bar and pedal member pivotally supported from the vehicle, a stop at the upper end of the guide bar, a fixed support on the vehicle, said support coöperating with the stop to limit the movement of the guide bar, a strut pivotally connected to the pedal member, a foot piece, means connecting the strut to the foot piece, means for guiding said foot piece from the guide bar, a nose on the strut, a projection on the pedal member, said nose and projection being adapted to limit the movement of the pedal member and strut beyond the straight line position on the operation of the pedal member, a fixed guide surface on the support, said guide surface being adapted to guide the nose on the strut when the pedal member is pulled upward so that the pedal member, the strut and the guide are all brought into an approximately horizontal position.

4. A lifting jack for suspension from a vehicle comprising a guide bar and a pedal member pivotally supported from the vehicle so that they can be turned up out of the way, a strut pivoted to the pedal member, a foot piece, means connecting the strut to the foot piece, and means for guiding said foot piece from the guide bar, said connecting and guiding means being such that when the guide bar is dropped to its operative position and the pedal is operated, the vehicle is lifted, and means for holding the pedal member, the strut, and the guide bar in the raised position when out of use.

5. A lifting jack for suspension from a vehicle comprising a guide bar formed in two parts, one adapted to slide upon the other, one part of said guide bar being pivotally supported on the vehicle, a foot piece attached to the sliding member of the guide bar, a pedal member pivotally supported from said vehicle, a strut pivoted to the pedal member, and means connecting the strut to the sliding member of the guide bar, said means being such that on the depression of the pedal member the sliding member will be moved outwardly from the pivoted member of the guide bar.

1,204,163. POWDER-BLENDING MACHINE. ANTON K. KUSEBAUCH, Pittsburgh, Pa. Filed July 10, 1916. Serial No. 108,375. (Cl. 83—73.)



1. The combination, in a powder blending machine, of a pair of upper and lower inclined chutes, the discharge end of the lower extremity of the upper chute being disposed a short distance above the lower chute, at a predetermined distance from the lower extremity thereof and the discharge end formed of the lower chute being tapered from a minimum width at its lower extremity to the full width of the chute at or before reaching a point approximately beneath the discharge end of the upper chute; and means for vibrating the chutes for the purpose of flowing the powder.

2. The combination, in a powder blending machine, of a labyrinth blending unit comprising a plurality of adjacently disposed pairs of upper and lower inclined chutes which are interlaced to stand in approximately X form, with the lower extremity of alternate lower chutes pointing in opposite downward directions, the discharge ends of the upper chutes being disposed a short distance above the lower chutes and at a predetermined distance, from the discharge ends thereof, so as to cause powder flowing down the upper chute to be layered upon the powder flowing down the lower chute; and means for vibrating the chutes for the purpose of flowing the powder.

3. The combination, in a blending machine, of a plurality of superimposed labyrinth blending units, each unit comprising a plurality of interlaced and inclined upper and lower chutes, the upper chutes being disposed to deposit powder layerwise upon powder flowing down in the lower chutes; said lower chutes having tapered discharge ends adapted to form curtained powder discharges, said chutes with tapered ends being disposed above and crosswise of a plurality of chutes forming a lower labyrinth unit, for the purpose of distributing the curtained powdered discharges falling from the tapered discharge ends into a plurality of chutes forming the lower unit; and means for vibrating said units.

4. The combination, in a blending machine, of a plurality of superimposed labyrinth blending units, each unit comprising a plurality of interlaced and inclined upper and lower chutes, the upper chutes being disposed to deposit powder layerwise upon powder flowing down in the lower chutes; said lower chutes having tapered discharge ends adapted to form curtained powder discharges, said chutes with tapered ends being disposed above and crosswise of a plurality of chutes forming a lower labyrinth unit, for the purpose of distributing the curtained powdered discharges falling from the tapered discharge ends into a plurality of chutes forming the lower unit; means for vibrating said units, and means for feeding powder into the upper labyrinth unit.

5. The combination, in a blending machine, of adjacently disposed tiers of labyrinth units; each tier being formed of a plurality of superimposed labyrinth blending units, comprising a plurality of interlaced and inclined upper and lower chutes, the upper chutes being disposed to deposit powder layerwise upon powder flowing down in the lower chutes; said lower chutes having tapered discharge ends adapted to form curtained powder discharges, said chutes with tapered ends being disposed above and crosswise of a plurality of chutes forming a lower labyrinth unit, for the purpose of distributing the curtained powdered discharges from falling from the tapered discharge ends into a plurality of chutes forming the lower unit; means for feeding powder into the upper labyrinth unit; and means for vibrating said units.

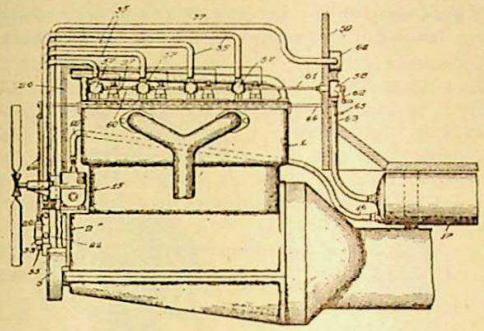
[Claims 6 to 11 not printed in the Gazette.]

1,204,164. GAS-ENGINE STARTER. GEORGE Y. LAUCHIN, Crystal Falls, Mich., assignor of one-third to Edward H. Sensiba, Crystal Falls, Mich. Filed Apr. 8, 1915. Serial No. 19,918. (Cl. 123—181.)

1. The combination with an internal combustion engine, of an electrical spark timer operated thereby, a fluid pressure starter for the engine comprising tubes leading to the separate cylinders, and distributer valve mechanism axially fixed with respect to and operable simultaneously with the electrical timing mechanism and having a longitudinally shiftable element for opening all the distributer valves when desired.

2. The combination with an electrical timer with a gas engine comprising a rotatable contact maker, of a fluid pressure starter comprising distributer valve mechanism having a plurality of separate valves, a common operating member for the electrical timer and for the said valve mechanism, and a cam element longitudinally

shiftable on the member having a portion to open and close all of the valves at the same time.



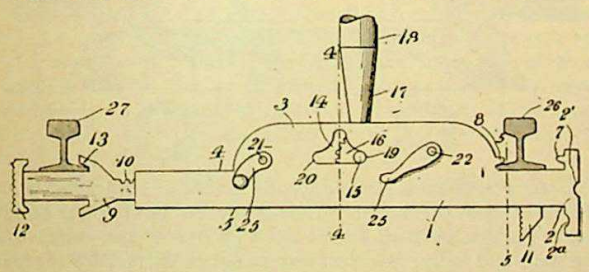
3. In a fluid pressure gas engine starter, the combination with an annular pressure chamber, means forming passages leading therefrom, radially movable valves to control the admission of fluid under pressure from the said passages normally held closed by fluid in the pressure chamber, and a rotatable cam for raising the valves from their seats in succession and with an extension for raising them all simultaneously.

4. In a fluid pressure starter for gas engines, the combination with distributer valve mechanism comprising radially movable valves, of rotatable longitudinally shiftable means in connection with the engine for opening the valves in succession and for opening all the valves simultaneously when shifted axially or longitudinally.

5. In a fluid pressure starter for gas engines with a plurality of cylinders, the combination with a separate fluid pressure admission stem for each cylinder, a valve connected thereto, a fluid pressure distributing valve connected to each of the other valves for admitting fluid under pressure to the several cylinders in succession, and means shiftable longitudinally and operable to open all of the distributing valves for the several cylinders simultaneously when desired.

[Claims 6 to 11 not printed in the Gazette.]

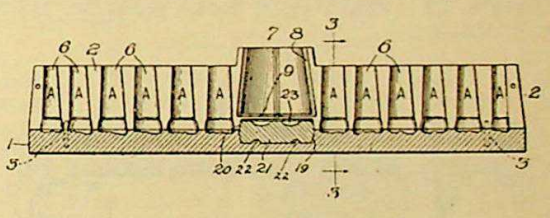
1,204,165. TOOL. SAMUEL F. LEGG, Sylvia, W. Va. Filed Feb. 9, 1916. Serial No. 77,217. (Cl. 254—66.)



1. In a device for the purpose set forth, a casing having a laterally extending plate closing one end thereof, the sides of the casing having their central portion widened and projecting over one of the faces of the said casing, and the said face between the said extending sides being opened, the opposite face of the casing being provided with a centrally arranged elongated opening, a draw bar in the casing and projecting therethrough, a lateral finger on the draw bar projecting through the elongated opening in the casing, and the opposite face of the draw bar being toothed, the projecting sides of the casing having alining T-shaped openings, an operating member having a toothed head which coöperates with the teeth of the draw bar, the head of said operating member being disposed between the projecting sides and having lateral trunnions received in the T-shaped openings, and pawls pivotally secured between the projections of the sides and spaced approximately an equal distance from the T-shaped openings and the said pawls adapted to co-act with the teeth of the draw bar.

2. In a device for the purpose set forth, a substantially rectangular casing, a laterally extending plate closing one of the ends of the casing, said casing having its sides centrally widened and extending over one of the faces of the casing, said face between the widened portions of the sides being opened, the said face, adjacent the end plate having a laterally disposed angularly arranged lip, the opposite face being provided with a centrally arranged longitudinally extending opening, a toothed bar received in the bore of the casing and projecting through the open end thereof, a finger upon the bar passing through the elongated opening in the casing, the side extensions of the casing having each a centrally arranged alining substantially T-shaped opening, an operating member including a toothed head for coöperating with the teeth of the bar disposed between the sides, the toothed end of the said operating member having laterally extending trunnions received in the T-shaped openings, pivoted pawl members between the side extensions and to the opposite sides of the operating member, handles for the pawl members, the outer end of the bar having a laterally extended head, and a laterally disposed angularly arranged lip upon one of the faces of the bar adjacent the said head.

1,204,166. APPARATUS FOR MAKING ARTIFICIAL TOOTH-CROWNS. SAMUEL A. LEVIN, Chicago, Ill. Filed Feb. 15, 1915. Serial No. 8,150. (Cl. 11—115.)



1. In combination, two elongated mold sections, each provided intermediate its ends with a cup section, said cup sections forming a cup having diametrically opposite grooves in its internal walls, and a division plate adapted to be positioned in said cup with its edges lying in said grooves, said plate stopping short of one end of the cup, and said plate having an enlargement.

2. The combination of a tri-sectional dental mold comprising a bottom section and two side sections releasably secured together, said bottom section having a recess in its upper side, and the side sections forming between them a similarly shaped recess registering with the first mentioned recess, and a member removably positioned in said recesses, said member having a counterdie recess in its upper side.

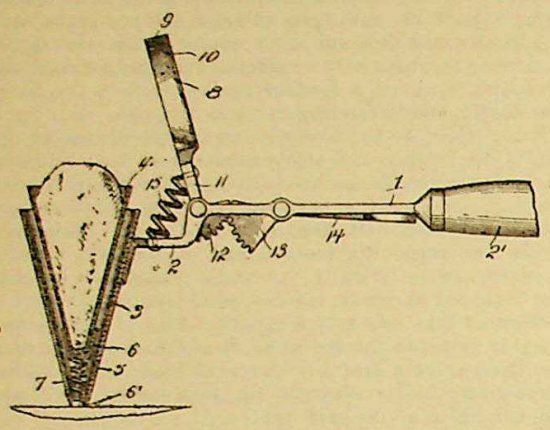
3. The combination of a cup and a division plate adapted to be positioned in said cup, said plate stopping short of one end of the cup, said plate having a central enlargement.

1,204,167. ICE-CREAM-CONE FILLER. WAYNE LIKE, Plainwell, Mich. Filed Nov. 13, 1915. Serial No. 61,342. (Cl. 107—48.)

1. An ice cream cone filler comprising a conical holder adapted to receive the cone, means for locking said cone within the holder, a plunger rod slidably mounted in the lower end of said holder and projecting beyond the said lower end, a cup formed on one end of said rod and lying within said holder, and a contractile spring mounted on said plunger rod within said holder and having one end thereof secured to said cup, the remaining end being secured to said holder, whereby the rod will be projected from the holder.

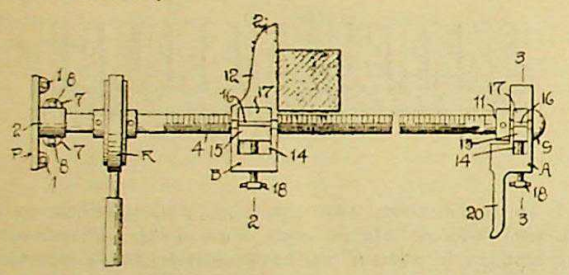
2. An ice cream cone filler comprising a rod having one end thereof bent at right angles to provide an off set portion, a cone holder secured to the free extremity of said off set portion, a lever pivotally mounted upon said rod at its juncture with off set portion, a locking cap formed on the outer end of said lever and adapted to engage said holder, a contractile spring having one extremity thereof secured to said off set portion, the oppo-

site extremity being secured to said lever, a sector gear formed on the opposite end of said lever, a second sector



gear pivotally mounted on said rod and meshing with the first mentioned gear, and a handle formed on the last mentioned gear.

1,204,168. WIRE-STRETCHER. EDDIE B. LINDSEY, Buffalo, Ala. Filed Aug. 5, 1916. Serial No. 113,299. (Cl. 254—67.)



1. A device of the character described comprising an elongated bar, a jaw rotatably engaged with the bar and held against movement longitudinally thereof, a second jaw capable of movement longitudinally of the bar, each of said jaws being provided in a side face with a groove, a pair of blocks positioned within said groove, and means for imparting movement to one of the blocks relative to the other.

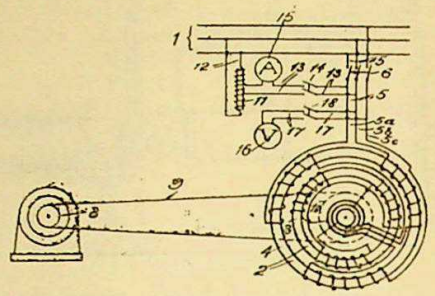
2. A device of the character described comprising an elongated bar, a jaw rotatably engaged with the bar and held against movement longitudinally thereof, a second jaw capable of movement longitudinally of the bar, each of said jaws being provided in a side face with a groove, a pair of blocks positioned within said groove, and means for imparting movement to one of the blocks relative to the other, said movable block being provided with a flange extending in a direction toward the second block and adapted to overlie the same when said blocks are in close proximity one to one another.

1,204,169. METHOD OF SYNCHRONIZING. CARL A. LOHR, New York, N. Y. Filed May 27, 1907. Serial No. 376,021. (Cl. 172—245.)

1. The new art of synchronizing, which consists in impressing a part of the voltage of a current source on a dynamo when near synchronism, and applying the full voltage of said source at an instant of a critical inductive reaction of said dynamo.

2. The new art of synchronizing a dynamo with a current source, which consists in preliminarily connecting both members of said dynamo with a part of the voltage of the source, and supplying normal operating current to said dynamo at an instant which is characterized by a critical inductive behavior of said dynamo when preliminarily connected.

3. The method of synchronizing a dynamo with a current source, which consists in exciting both members of said dynamo similarly to normal synchronous operation from a part of the voltage of the source for producing a relatively weak field in either member, and normally connecting said dynamo to the source for synchronous operation in a moment where said fields are adding each other.

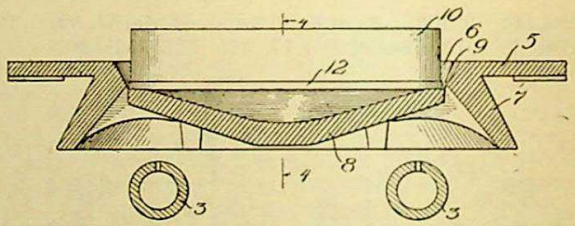


4. The method of synchronizing a synchronous dynamo with respect to a given current source, which consists in rotating said dynamo near synchronism, supplying both members of said dynamo when so rotating with current of a value considerably less than that of the normal operating current for the purpose of determining an instant which is favorable for proper synchronous operation, and supplying the normal operating current to said dynamo at or approximately at said instant.

5. The method of synchronizing a dynamo with a given alternating-current source, which consists in impressing a comparatively small part of the voltage upon said dynamo when rotating in proximity to synchronism, and establishing the normal connections for synchronous operation at an instant which is characterized by a critical value of self-induction of said dynamo.

[Claims 6 to 11 not printed in the Gazette.)

1,204,170. APPARATUS FOR SOLDERING CANS. FRANCIS P. MCCOLL, St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 9, 1913. Serial No. 760,079. (Cl. 113—73.)



1. In a soldering machine, one or more elongated burners, a carrier for a can to be soldered having an imperforate bottom portion surrounded by a seat for supporting the can, and a narrow annular passage extending through the same around the seat, said passage being of substantially the same size and shape as the end of a can to be soldered, means for moving said carrier along the burner or burners above and in proximity to the same, and means on the under side of the carrier for deflecting the flame in a continuous annular sheet through said passage.

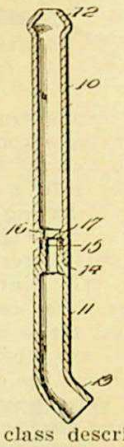
2. A soldering machine comprising a burner, a can carrier having a concave imperforate seat for a can and having a narrow annular passage surrounding said seat, said passage extending through the carrier and being substantially the same shape as and a little larger than the end of a can to be soldered, deflecting means on the under side of the carrier for deflecting a flame beneath the carrier in a continuous sheet throughout the entire length of said passage, and means for uninterruptedly moving said carrier over the burner and in proximity thereto.

3. In a soldering machine, an elongated burner, a can carrier having a concave seat for supporting a can to be soldered, said carrier having a narrow annular passage extending through the same around said seat, said passage being of substantially the same shape as and a little larger than the end of the can to be soldered, deflecting means

on the under side of the carrier for deflecting flame and hot gases into said passage in the form of a continuous sheet extending throughout the length of said passage, and means for moving said carrier lengthwise of the burner and above and in proximity thereto.

4. In a soldering machine, one or more elongated burners, a carrier for a can to be soldered having a concave seat for supporting the can and a narrow annular passage extending through the same around the seat, said passage being of substantially the same shape as and a little larger than the end of a can to be soldered, means for moving said carrier along the burner or burners above and in proximity to the same, and means on the under side of the carrier for deflecting the flame in a continuous annular sheet throughout the length of said passage.

1,204,171. SANITARY DRINKING-TUBE. NELSON L. MCKAY, Walden, N. Y. Filed May 5, 1915, Serial No. 26,015. Renewed Apr. 25, 1916. Serial No. 93,537. (Cl. 210—16.)



1. A device of the class described comprising coacting tubular members telescopically united at their confronting ends, one of said members having an annular seat at its inner end and the other member having an inwardly directed stop rib, and a foraminous member having a flange engaging in the seat and held in position by the stop rib.

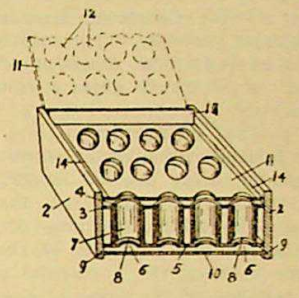
2. A device of the class described comprising coacting tubular members, one of said members reduced at one end to telescopically engage the other member and with an annular seat in the reduced portion and the other member having an inwardly directed stop rib, and a filter member having a flange engaging in said seat and held in position by the stop rib.

3. A device of the class described comprising coacting tubular members telescopically united at their confronting ends, one of said members curving laterally and converging at one end and having an annular seat at its inner end, and the other member having an inwardly directed stop rib, and a foraminous member having a flange engaging in said seat and held in position by the stop rib.

4. A device of the class described comprising coacting tubular members, one of said members reduced at one end to telescopically engage the other member and with an annular seat in the reduced portion and the other member having an inwardly directed stop rib, a foraminous member having a flange engaging said seat, and a receptacle for a disinfectant having a foraminous wall and bearing against said flanged foraminous member and engaged by said stop rib.

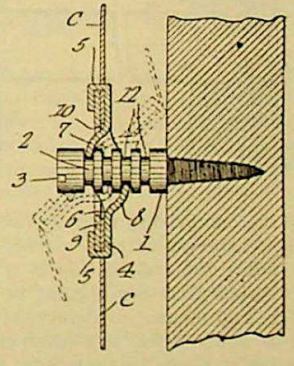
1,204,172. EGG TESTER AND DELIVERY BOX. THOMAS MCLAUGHLIN, Saginaw, Mich., assignor of one-half to The Hartley Steel Crated Box Company, Saginaw, Mich., a Corporation of Michigan. Filed June 25, 1914, Serial No. 847,308. Renewed Sept. 19, 1916. Serial No. 121,089. (Cl. 217—26.)

1. A receptacle comprising a frame having side walls, and end walls of less height than the side walls, a container in the frames having cells provided with seats at their lower ends for the eggs, a removable plate slidable between the side walls to protect the ends of eggs on said seats, and a cover hinged to one of the end walls and arranged to swing to closed position between the projecting edges of the side walls, said cover having openings in line with and smaller in diameter than the cells.



2. A receptacle comprising a case, a container therein and disposed above the lower edge and below the upper edge of the case, said container being provided with individual cells having seats at their lower ends, the case below the container being provided with oppositely disposed slideways, a protecting plate engaging the slideways, and a cover hinged to the case and provided with openings complemental to but of smaller diameter than the diameter of the cells.

1,204,173. CURTAIN-FASTENER. THOMAS J. MCMEEKIN, Jacksonville, Fla. Filed Feb. 18, 1916. Serial No. 79,154. (Cl. 24—214.)



1. A fastener including a stud, an eye having a stud receiving opening, the opposed upper and lower portions of the wall of said opening being pressed in opposite directions to form oppositely inclined lips, the distance on a straight line between the edges of the lips being greater than the greatest diameter of the stud but the vertical distance between the planes occupied by the middle portions of the edges of the lips being less than the greatest diameter of the stud.

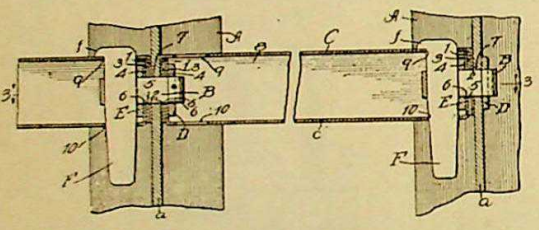
2. A fastener of the character described including a stud having annular grooves, a curtain engaging eye having a stud receiving opening, the horizontal diameter of the opening being greater than the greatest diameter of the stud, the upper portion of the wall of the opening being pressed outwardly to form a downwardly and outwardly inclined lip, the lower portion of the wall of the opening being pressed inwardly to form an upwardly and inwardly inclined lip, the straight line distance between the middle portions of the lips being greater than the greatest diameter of the stud but the vertical distance between the horizontal planes occupied by the middle portions of the lips being less than the greatest diameter of the stud.

3. A fastener of the character described including a stud having portions of different diameters, and an eye having a stud receiving opening, the horizontal diameter of the opening being greater than the greatest diameter of the stud, the upper portion of the wall of the opening being pressed outwardly to form a downwardly and outwardly inclined lip, the lower portion of the wall of the

opening being pressed inwardly to form an upwardly and inwardly inclined lip, the straight line distance between the middle portions of the lips being greater than the greatest diameter of the stud but the vertical distance between the horizontal planes occupied by the middle portions of the lips being less than the greatest diameter of the stud.

4. A fastener of the character described including a stud having annular grooves, and a curtain engaging eye including a disk having a stud receiving opening the horizontal diameter of which is greater than the greatest diameter of the stud, the upper portion of the wall of the opening being pressed outwardly to form a downwardly and outwardly inclined lip and the lower portion of the wall of the opening being pressed inwardly to form an inwardly and upwardly inclined lip, the straight line distance between the middle portions of the lips being greater than the greatest diameter of the stud but the vertical distance between the horizontal planes occupied by the middle portions of the edges of the lips being less than the greatest diameter of the stud, a second disk having an opening surrounding the opening in the first mentioned disk, and means carried by one of the disks for holding the two disks together, said disks constituting curtain clamping means.

1,204,174. METAL SHELVING. CHAUNCEY L. C. MAGEE, Chicago, Ill., assignor to Federal Steel Fixture Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1915. Serial No. 19,099. (Cl. 211—27.)



1. Metal shelving comprising risers, sheet metal shelves having interiorly reinforced integral corner portions, each said portion including the end section of a vertical flange and one or more integral layers applied to the inner surface of said flange, and means for detachably securing said corner portions to said risers, said shelves having lower horizontal flanges which are integral with certain of said layers.

2. Metal shelving comprising risers, sheet metal shelves having reinforced corner portions, and means for detachably securing said corner portions to said risers, said portions being each composed of three vertical thicknesses of sheet metal, and said means including a pin inserted through said three-ply thickness, said pin having provisions to prevent its displacement from the shelf and riser.

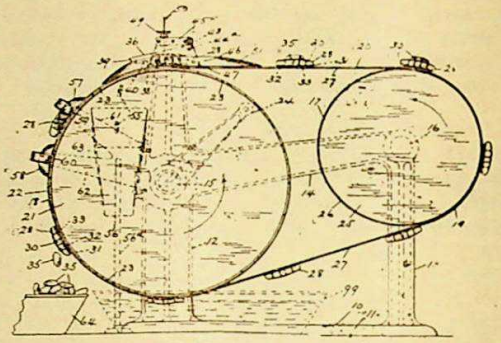
3. Metal shelving comprising risers, sheet metal shelves having reinforced corner portions, and means for detachably securing said corner portions to said risers, said portions being each composed of three thicknesses of sheet metal, and the shelf being provided with a vertical wall depending therefrom, the lower portion of said wall being turned inward to form a horizontal flange, one said thickness being integral with the top of the shelf, another said thickness being integral with said vertical wall, and the third layer of metal being integral with said flange.

4. Metal shelving comprising risers, sheet metal shelves having reinforced corner portions, and means for detachably securing said corner portions to said risers, said portions being each composed of a plurality of flaps which are folded one upon the other in vertical planes, and one said flap being integral with and upturned from one end of a horizontal stiffening flange extending along one edge of the shelf.

5. A riser, a sheet-metal shelf having a horizontal flange below the top thereof, a horizontal element for removably supporting said shelf on said riser, and means inserted downward through the top of said shelf and through said flange to hold said element in place, the ends of said flange being turned up to form reinforcing and supporting portions for the corners of the shelf.

[Claim 6 not printed in the Gazette.]

1,204,175. MACHINE FOR PITTING FRUIT. WILLIAM W. MAMEL, Sr., New York, N. Y., assignor to Garrett E. Haring, New York, N. Y. Filed Mar. 1, 1915. Serial No. 11,188. (Cl. 146—6.)



1. In a machine for pitting fruit, a frame, a cutter mounted on the frame, having a knife-edge for slitting the fruit, an extracting member on the cutter for engaging the pit to remove it from the fruit, a carrier adapted to removably hold the fruit and having a plurality of spaced openings therethrough, a movable conveyer supporting the carrier so as to be transmitted for the cutter to engage the fruit in the carrier, said conveyer having openings alining with the openings of the carrier during the operation thereof, means on the frame adapted to be operated for transmitting the conveyer whereby the fruit in the carrier will first be slitted by the cutter and its pit will then be engaged by the extracting member so as to be removed from the fruit and discharged through the openings, and means for contacting with the cutter to permit any meat of the fruit collected on the cutter to be removed therefrom.

2. In a machine for pitting fruit, a frame, a cutter mounted on the frame, having a knife-edge for slitting the fruit, an extracting member on the cutter for engaging the pit to remove it from the fruit, a plurality of carriers adapted to removably hold the fruit and having a rim provided with a plurality of spaced openings therethrough, a movable conveyer supporting all the carriers so as to be transmitted for the fruit in each carrier to be successively engaged by the cutter, said conveyer having openings alining with the openings of the carrier during the operation thereof, means on the frame adapted to be operated for transmitting the conveyer whereby the fruit in each carrier will first be slitted by the cutter and its pit will be engaged by the extracting member so as to be removed from the fruit, and means beneath the carriers and conveyer for dipping the carriers during their movement for removing the matter collected thereon.

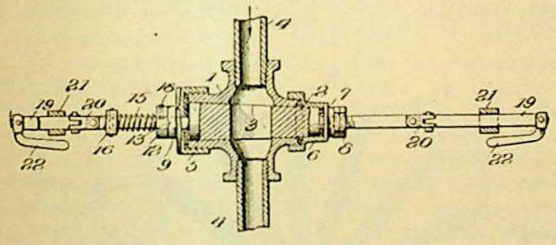
3. In a machine for pitting fruit, a frame, a cutter mounted on the frame, having a knife-edge for slitting the fruit, an extracting member on the cutter for engaging the pit to remove it from the fruit, a spring carrier adapted to removably hold the fruit and means for moving the same into gripping position, means on the frame, supporting the carrier, said means being operable for transmitting the carrier whereby the fruit will be first slitted by the cutter and its pit will then be engaged by the extracting member so as to be removed from the fruit, and means on the frame, connected to the cutter to permit the cutter to be adjusted vertically relative to the carrier so that the fruit may be properly slitted and pitted, substantially as described.

4. In a machine for pitting fruit, a frame, a cutter mounted on the frame, having a knife-edge for slitting the fruit, an extracting member on the cutter for engaging the pit to remove it from the fruit, a plurality of carriers adapted to removably hold the fruit, means on the frame,

supporting the carriers, and including a conveyer having a plurality of openings therein, said means being operable for transmitting the carriers in succession whereby the fruit in each carrier will first be slitted by the cutter and the pit of each fruit will then be engaged by the extracting member so as to be removed from the fruit, and discharged through the openings, a receptacle supported at one side of the machine in receiving position relative to the openings for the discharge of the pits therein, and means on the frame, connected to the cutter to permit the cutter to be adjusted relatively to the carrier so that the fruit may be properly slitted and pitted, substantially as set forth.

5. In a machine for pitting fruit, a frame, a cutting blade mounted on the frame and having a straight knife-edge for slitting the fruit, means for pivotally supporting the blade, said blade having a projecting shoulder forming an extracting member for the pits, to remove the latter, a plurality of carriers adapted to removably hold the fruit and comprising hinged members, a circumferentially movable conveyer supporting all the carriers so as to be transmitted for the fruit of each carrier to be successively engaged by the cutters, means for supporting the conveyer, said means being operable for transmitting the conveyer whereby the fruit of each carrier will first be slitted by the knife edge of the cutter and the pit of the fruit will then be engaged by the extracting member to remove the pit from the fruit, means for normally spreading the hinged members of the carriers, means for moving the same into clamping position during the cutting operation and means to move said hinged members into clamping engagement at spaced intervals after the cutting operation and to release the same for permitting the discharge of the pitted fruit.

1,204,176. TRAIN-PIPE VALVE. DAVID C. MITCHELL, Pittsburgh, Pa. Filed June 2, 1915. Serial No. 31,759. (Cl. 137—7.)



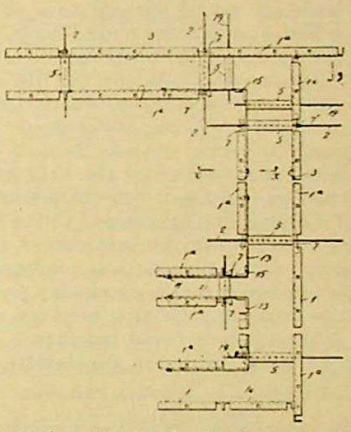
1. A train pipe valve having a stem extending in opposite directions in axial alinement therewith, such stem having its end portions jointed, supporting means for the outermost sections of the valve stem, thereby admitting of the valve having a limited movement to compensate for stress, and handles jointed to the outer ends of the stem beyond the supporting means.

2. In a valve embodying a casing and a turn plug, a collar fixed with reference to the casing and having notches and a cut away portion, a second collar slidable on and rotatable with the valve stem and having two projections, the one arranged to coöperate with the notches and adapted to ride into and out of engagement therewith and the other projection arranged to operate in the cut away portion and engage the end walls thereof to limit the turning of the plug, and means yieldingly pressing the second collar in contact with the first-mentioned collar.

3. In a valve of the type embodying a casing and turn plug, a cap fitted to the casing and provided with a collar having notches set quartering and an opposed cut away portion, a second collar slidable on and rotatable with the valve stem and provided with two projections, one adapted to coöperate with the notches and the other to operate in the cut away portion of the first-mentioned collar, and a spring mounted upon the valve stem and normally pressing the second collar into engagement with the first-mentioned collar.

4. A train pipe valve comprising a casing, caps threaded to opposite ends of the casing, a turn plug mounted in the casing and having a stem projecting in opposite directions from its ends, other stems jointed to the ends of the valve stem, handles jointed to the outer ends of the last-mentioned stems, a collar formed with one of the caps, and having opposed notches and a cut away portion, a second collar slidable on and rotatable with the valve stem and having two projections, one arranged to coöperate with the notches and the other to operate in the cut away portion of the first-mentioned collar, and a spring mounted upon the valve stem and exerting a pressure upon the second collar to yieldingly hold the same in engagement with the first-mentioned collar.

1,204,177. SECTIONAL MOLD FOR CONCRETE WALLS, FLOORS, CEILINGS, &c. MILTON DANA MORRILL, Washington, D. C., assignor to Read & Morrill, Inc., a Corporation of New York. Filed Dec. 13, 1911. Serial No. 665,425. (Cl. 25—131.)



1. A mold-section for molds, for concrete walls and the like, having two rows of means whereby another section may be secured to the face of said first section, the said two rows of fastening means being equi-distant from two opposite edges of said section, corresponding ends of said rows being less distant from one edge of the section than are the other ends of said rows from the oppositet edge of the section; whereby by inverting the section such fastening means are caused to occupy positions intermediate the positions of such fastening means before inversion of the section.

2. A mold-section for molds for concrete walls and the like, consisting of a substantially rectangular wall-member having two rows of means whereby another section may be secured to the face of said first section, the said two rows of fastening means arranged parallel to and equi-distant from two opposite edges of said section, corresponding ends of said rows being distant from the proximate edge of said section by approximately half the distance of the other ends of said rows from the opposite edge of the section; whereby by inverting the section such fastening means are caused to occupy positions intermediate the positions of such fastening means before inversion of the section.

3. In a mold for concrete walls and the like, the combination of outer and inner mold walls each formed of sections arranged edge to edge, said mold walls spaced apart one from another, one of said mold walls having at the meeting corners of a plurality of its mold plates, an opening for the passage of a transverse tie bar, the other mold wall formed in part of mold plates having in their edges a plurality of suitably spaced slots adapted to receive such tie bars, such slotted plates overlapping more or less the adjacent wall plates and provided with means for securing such overlapping plates together; whereby the length of one of said mold walls may be adjusted with respect to the other mold wall, and whereby tie bars may be passed from the tie bar opening at meeting corners of the plates of one wall, directly across either into similar tie bar openings, or into slots, as the case may be, of the other mold wall.

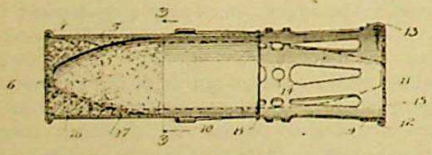
4. In a mold for concrete walls and the like, the combination of outer and inner mold walls each formed of sec-

tions arranged edge to edge, said mold walls spaced apart from one another, the outer mold wall having a corner formed by abutting edges of plates on one side of the corner against the faces of plates on the other side of the corner, certain of the plates so abutting provided with means whereby the point of abutment may be adjusted, said outer mold wall having also at the meeting corners of its mold plates, openings for the passage of transverse tie bars, the inner mold wall formed in part of mold plates having in their edges a plurality of suiably spaced slots adapted to receive such tie bars, such slotted plates overlapping more or less the adjacent wall plates and provided with means for securing such overlapping plates together, other of the mold plates of the inner wall formed to provide openings, for the passage of transverse tie bars, at the meeting corners of such plate; whereby by varying the overlap of the slotted plates with reference to the adjacent plates, the length of the inner mold wall may be adjusted to bring the tie bar openings at the meeting corners of the plates of the inner mold walls, opposite the corresponding openings of the outer mold wall.

5. A mold for concrete walls and the like comprising a mold wall formed of a plurality of similar ordinary wall sections flanged on one face and of corner sections and adjusting sections, the latter likewise flanged on one face, said adjusting sections located at the ends of tiers of ordinary wall sections and located in the planes of adjacent ordinary wall sections, and overlapped at the back more or less according to conditions by said corner sections, said adjusting sections and corner sections provided with coacting means whereby the corner sections may project more or less beyond the adjacent adjusting sections as conditions may require said sections secured together.

[Claims 6 and 7 not printed in the Gazette.]

1,204,178. RECEPTACLE FOR LIGHTED CIGARS. LAURA MANGER MYERS, Chicago, Ill. Filed Dec. 18, 1914. Serial No. 877,990. (Cl. 206—41.)



1. A receptacle for lighted cigars, comprising a tube having a non-combustible lining in one end thereof for receiving the lighted end of a cigar and open at the other end, a second tube telescoping with said first-named tube, said second tube being perforated and having a cover at the outer end thereof.

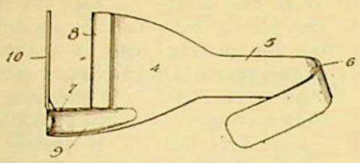
2. A receptacle for lighted cigars, comprising telescoping members, with a perforated cover at one end and closed at the opposite end, and having a lining of non-combustible material in the closed end, said lining being formed with a tapered recess for receiving the lighted end of a cigar.

3. In a receptacle for cigars, the combination of a tube closed at one end and open at the opposite end, a lining of non-combustible material in the closed end of the tube, having a substantially conical recess therein for receiving the lighted end of a cigar, a second tube telescoping with said first-named tube, and a cover for said second tube, said second tube and cover having ventilating openings therein.

1,204,179. FRUIT-PEELER. LAURA MANGER MYERS, Chicago, Ill. Filed July 17, 1915. Serial No. 40,500. (Cl. 30—9.)

1. A fruit peeler comprising a body portion, having an integrally formed strap for engagement with the outer part of the hand, and an integrally formed guard for engagement with the forefinger, such body portion also having a projection at one end of the guard with a knife blade formed integrally therewith, said blade lying substantially parallel to the guard and in a plane at substantially right-angles to the plane of the body portion and in spaced relation to the guard.

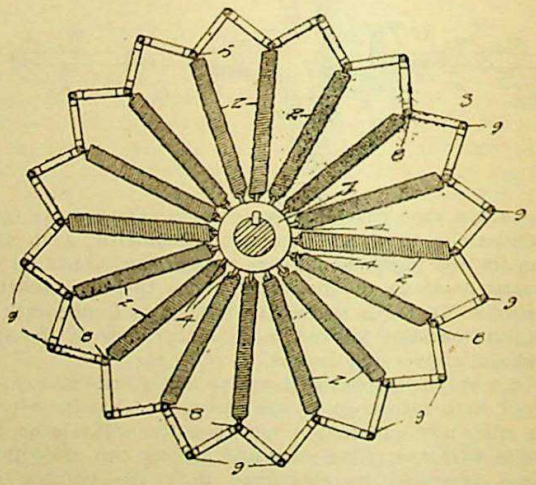
2. A fruit peeler formed of a single piece of sheet metal, having a body portion adapted to fit the hand, said body portion being continued at one end to form a loop for engagement with the outer part of the hand, and having an upwardly turned guard at the other end, a cutting blade arranged adajacent to said guard, and in spaced relation thereto to form a passageway between the blade and guard, to permit the passage of the fruit peeling as it is removed from the fruit, and a support for a blade comprising an extension at one end of the guard.



3. In a device of the character set forth, the combination of a handle for engagement with a hand, said handle having a loop at one end, and a guard at the other end, a knife arranged substantially parallel to the guard and in spaced relation thereto, and in a plane approximately at right-angles to the plane of the main portion of the handle, said blade being supported by an extension at one end of the guard.

4. A fruit peeler comprising a plate shaped to form a body portion for engagement with the hand, said body portion having a strap-like extension forming a loop for engagement with the outer portion of the hand, the other end of said plate being cut, and one portion bent up to form a guard, and another portion bent down to form a knife blade substantially parallel to the guard and at a distance therefrom, said blade being supported by an extension at one end of the guard.

1,204,180. ADJUSTABLE FLY-WHEEL. HENRY A. NAYLOR, Valpariso, Chile. Filed June 22, 1916. Serial No. 105,186. (Cl. 74—6.)



1. An adjustable fly wheel including an adjustable extensible rim, a hub and extensible springs connecting the rim with the hub, said springs and rim being adapted to move outwardly under the influence of centrifugal force when the speed of the fly wheel increases and to move inwardly when the speed decreases.

2. An adjustable fly wheel of the class described including radially arranged spokes consisting of extensible coiled springs and an adjustable rim connected with the spokes, said rim being extensible and adapted to move outwardly with the coiled springs as the speed of the fly wheel increases.

3. An adjustable fly wheel of the class described including a rim composed of zigzag arranged pivotally connected links alternately extended inwardly and outwardly and forming an extensible rim and springs connected with the inner angles of the links and adapted to move outwardly with the rim

4. An adjustable fly wheel of the class described including a hub, a rim consisting of zigzag arranged pivotally connected links alternately extending inwardly and outwardly, and forming an extensible rim, a hub and radially arranged coiled springs secured at their inner ends to the hub and at their outer ends to the links of the rim at the inner angles of the said links.

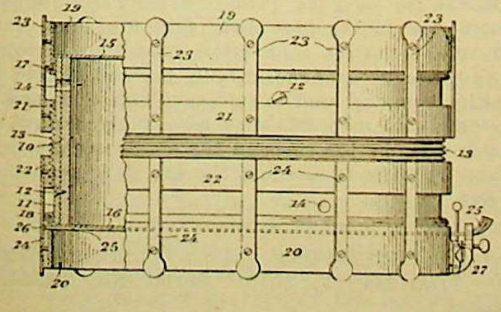
1,204,181. EXTENSIBLE TABLET. THOMAS J. NORTON, New York, N. Y., assignor, by mesne assignments, to Samuel J. Sloan, New York, N. Y. Filed Sept. 1, 1909, Serial No. 515,695. Renewed Sept. 19, 1916. Serial No. 121,087. (Cl. 40—63.)

1. In an extensible tablet, a plurality of horizontal bars, each being substantially H-shaped in cross-section, screws connecting such bars—each screw having an elongated shank-portion extending between adjacent H-bars and traversing the joint between the side members thereof to oppose all strains at such joint.

2. In an extensible tablet, a plurality of unit-bars, screws for securing such bars together, and means for changing such screws into non-rotatable connections whereby to more securely lock said bars together.

3. In a tablet, a plurality of unit-bars constituting the component parts thereof, each bar having apertures for the passage of screws and the walls of each screw aperture having interior corrugations, screws each having a reduced screw-portion and an enlarged and elongated shank-portion provided with peripheral grooves or corrugations—the said reduced screw-portion being adapted to enter a screw aperture in a preceding part of said tablet and the corrugations on the shank of the screw and in the wall of the aperture being adapted to register, and a pin inserted into the hole thus formed to lock said bars together.

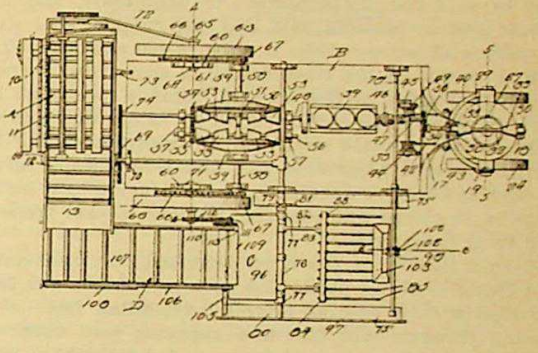
1,204,182. DRUM. FRED L. O'CONNER, Dorchester, Mass. Filed Dec. 3, 1915. Serial No. 64,929. (Cl. 84—10.)



1. A drum comprising a body portion having a threaded collar extending about the same, rings extending about the upper and lower ends of said body portion, heads of flexible material for said body portion connected with said rings, hoops engaging said rings, adjusting bands extending about said body portion and internally threaded to engage the threads of said collar, and strips connecting said bands with said hoops and serving as hand holds to turn the hoops and bands.

2. A drum comprising a body portion having a threaded collar extending about the same, adjusting bands threaded upon said collar, heads of flexible material for said body portion, hoops having operative engagement with said flexible heads, and turning strips connecting said adjusting bands with said hoops.

1,204,183. GRAIN-SHOCKER. GEORGE HENRY OMEALEY, Lake Providence, La. Filed Mar. 24, 1913. Serial No. 756,625. (Cl. 56—123.)

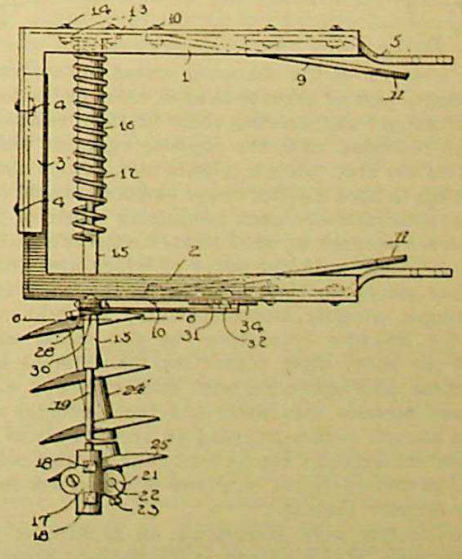


1. In a shocker, the combination with a drop table; of a shock cap, and a yieldable mounting for said shock cap.

2. In a shocker, a shock holder including a frame, a wheel journaled in said frame, a cable wound around said wheel; a spring arranged to rewind the cable when the latter is unwound, and a shock cap connected to the cable and adapted to fit the top of a shock.

3. In a shocker, a shock holder including a frame, a wheel journaled in said frame, a cable wound around said wheel; a spring arranged to rewind the cable when the latter is unwound, and a shock cap connected to the cable and adapted to fit the top of a shock; in combination with a tilting table having its upper end below said cap when the latter is wound up.

1,204,184. PLOW ATTACHMENT. FRANK M. ORNER, Chaseley, N. D. Filed Apr. 14, 1915. Serial No. 21,390. (Cl. 97—44.)



1. A harrow of the class described, comprising a frame provided with a plurality of adjustable sections, a harrow supporting sleeve carried by said frame, a rod carried by said sleeve, spring means connecting said rod to said sleeve, harrow disks carried by said rod, and means carried by said frame for vertically adjusting said harrow disks.

2. A harrow of the class described, comprising a frame provided with a plurality of laterally adjustable sections, a harrow supporting sleeve carried by said frame, an adjustably mounted rod carried by said harrow supporting sleeve, spring means connecting said rod to said sleeve, a harrow disk supporting shaft carried by said rod, disks carried by said shaft, and means carried by said frame for raising and lowering said disks.

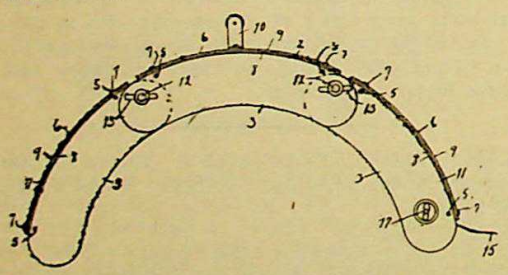
3. A harrow of the class described comprising a frame provided with a plurality of adjustable sections, a harrow supporting sleeve carried by said frame, a rotatable rod carried by said sleeve, yieldable means carried by said sleeve and engaging said rod for urging said rod in one direction, a depending harrow disk supporting shaft carried by said rod, disks carried by said shaft, and lever means associated with said rod for rotating the same, whereby said harrow disks may be raised and lowered.

4. A harrow of the class described comprising a frame, an adjustable rod carried by said frame, a depending harrow disk supporting shaft carried by said adjustable rod, disks carried by said shaft, an upwardly extending link carried by said adjustable rod, and lever means carried by said upwardly extending link for causing said harrow disks to be raised and lowered, relative to said frame as said lever is actuated.

5. In a harrow of the class described, the combination of a frame, a sleeve positioned upon said frame and being provided with a pair of laterally extending feet, means passing through said feet and engaging said frame for securing said sleeve to said frame, a rod rotatably carried by said sleeve, harrow disks carried by said rod, and means for swinging said harrow disks into and out of engagement with the ground.

[Claims 6 to 9 not printed in the Gazette.]

1,204,185. ELECTRIC PACK. HENRY PERLMAN, Philadelphia, Pa. Filed Mar. 17, 1914. Serial No. 825,360. (Cl. 219—45.)



1. In a device of the character stated an arcuate body comprising a pair of arcuate flanges, cross pieces for spacing said flanges and holding them in their relative positions, an inclosing wall, the opposite edges of which are secured to the cross pieces, sockets mounted on the inner faces of the flanges, electric lamps mounted in said sockets, a pair of side members, each comprising a pair of flanges, cross pieces secured to said flanges adjacent their ends and an inclosing wall, the edges of which are secured to said cross pieces, sockets mounted on the inner faces of said flanges, electric lamps mounted in said sockets, means for hingedly connecting the side pieces with the ends of the body, wires connecting the different sockets, a conductor cord connected with said wires and a switch interposed between said wires and the conductor cord.

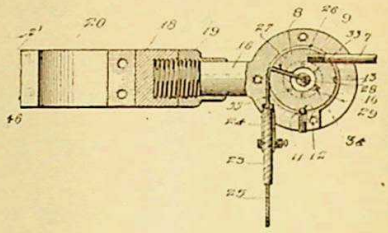
2. An electric pack comprising an arched body or crown, side members hingedly connected to the ends of said body and means carried by the body and side members for heating the interior thereof.

3. An electric pack comprising an arcuate or arched body or crown, a pair of oppositely disposed arcuate side members hingedly secured to said body or crown, means for hinging said side members to the body or crown and means for heating the interior thereof.

4. An electric pack comprising an arcuate or arched body or crown, an arcuate side member hinged to each end of said body, said side members being adjustable toward or away from each other to vary the distance therebetween, means for holding said side members in their adjusted positions and means carried by the body and side members for heating the interior thereof.

5. An electric pack comprising three arcuate members hinged together, whereby the central member becomes the crown of the arch formed by said members, said crown member being so arranged with relation to the other members as to form a solid wall between said members, and electric light bulbs carried by said members for heating the interior thereof.

1,204,186. VEHICLE-SIGNAL. ARTHUR ST. CLAIR PERRY, Los Angeles, Cal. Filed Apr. 28, 1913. Serial No. 764,267. (Cl. 116—31.)



1. In an automobile signal a support, a disk revoluble upon the support, a semaphone carried by the disk, a revoluble element, means for supporting the revoluble element near the center of the disk and being adjustably secured to the disk, and a flexible element passing through the disk and being connected at one end with the revoluble element.

2. In an automobile signal a support, means to connect the support with an automobile, a disk having an apertured center revolubly mounted upon the support, a semaphore secured rigidly with the disk and extending outwardly therefrom, a revoluble element mounted within the aperture within the disk, means to adjustably secure the revoluble element to the disk, said disk having an opening extending from its inner periphery to its outer periphery, and a flexible element extending through said opening and being connected with the revoluble element.

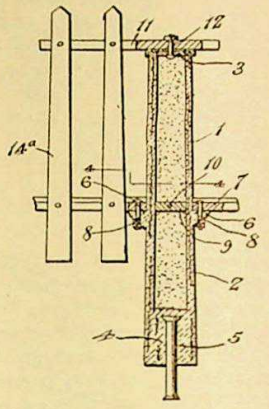
3. An automobile signal comprising a turret consisting of a disk, a head in which said disk revolves, spring pressed balls projecting laterally from said disk to hold the same against rattling in said head, a rod screwed tangentially into said disk, said head having a segmental peripheral recess to receive said rod and permit the same to be swung through an arc, a semaphore carried by said rod, means for securing said head to the automobile, and means for turning said turret.

4. An automobile signal comprising a turret consisting of a disk, a head in which said disk revolves, spring pressed balls projecting laterally from said disk to hold the same against rattling in said head, a rod screwed tangentially into said disk, said head having a segmental peripheral recess to receive said rod and permit the same to be swung through an arc, a semaphone carried by said rod, means for securing said head to the automobile, a revoluble disk in the first disk, said first disk having a radial hole, a flexible connection extending through said head and through said radial hole, the end of said flexible connection being secured to said revoluble disk, and means for holding said revoluble disk adjustably secured to the first disk whereby the slack in the flexible connection may be taken up without altering the angular position of the first disk.

1,204,187. FENCE-POST. JOHN PICKRELL, Louisville, Ky. Filed May 7, 1915. Serial No. 26,555. (Cl. 256—49.)

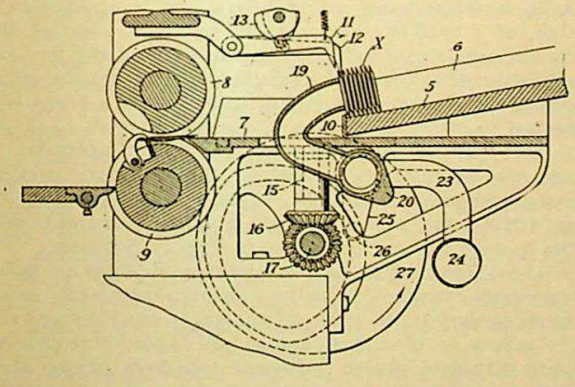
1. The combination of a hollow concrete fence post consisting of a channeled body having a solid lower portion and provided with a relatively wide channel extending from the solid lower portion to the top of the post, said post being provided above the solid portion with integral exterior projecting lugs having flat upper faces, a wooden

member extending across the channel between the lugs, a lower stringer supported upon the upper faces of the lugs, a cap having a flat upper face and fitted on the upper end of the fence post and an upper stringer arranged upon the flat top face of the cap.



2. The combination of a hollow concrete fence post consisting of a channeled body having a solid lower portion and provided with a relatively wide channel extending from the solid lower portion to the top of the post, said post being provided above the solid portion with integral exterior projecting lugs having flat upper faces, a wooden member extending across the channel between the lugs, a cap fitted on the top of the post and fencing having fastening means piercing the post and the wooden member.

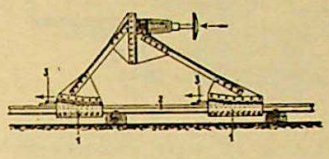
1,204,188. FEED MECHANISM. ALFRED L. PYE, Rochester, N. Y., assignor to Rochester Folding Box Company, Rochester, N. Y., a Corporation of New York. Filed May 5, 1915. Serial No. 25,931. (Cl. 101—41.)



1. In combination with a work support having an opening therein, a disk operating in said opening with its upper face flush with the work support, a stud on the disk, a feed table in which the blanks are stacked on an edge, the feeding end of the table being in rear of the turning axis of the disk, and a carrier for removing articles one at a time from the stack and presenting them in flat positions on the table in advance of the stud as the latter moves forwardly.

2. In combination with a work support having an opening therein, a disk operating in said opening with its upper face flush with the work support, a stud on the disk, the work support having an opening in advance of the axis of the latter, a sucker tube pivotally mounted beneath the work support in rear of the turning axis of the disk and having a portion concentric with the axis of turning of said sucker tube to operate above the work support in rear of the opening through which the tube moves, and a feed table in which the blanks are stacked on an edge, the feeding end of the table being in rear of the turning axis of the disk so that the end of the concentric portion of the sucker tube may grasp an article on the feed table in rear of the turning axis of the disk and present it flatwise in advance of the stud on the disk for feeding by the latter.

1,204,189. RAILROAD-BUFFER CONSTRUCTION. FRANZ RAWIE, Osnabruck-Schinkel, Germany. Filed Mar. 23, 1915. Serial No. 16,446. (Cl. 104—229.)



1. A slidable railroad-buffer construction comprising a buffer proper, a guide member connected thereto, a guide member coöperating with said buffer guide member in firm connection with the ground, said coöperating guide members so arranged as to allow displacement of the buffer in the direction of the rails and a jamming member held by pressure against said guide member fixed to the ground and adapted to be shifted in contact therewith, said jamming member further adapted to automatically jam a buffer element when sliding in one direction and to automatically give it free movement when sliding in the opposite direction.

2. A slidable railroad-buffer construction comprising a buffer proper provided with a guide way having an expanded section, a guide member within said guide way allowing a sliding movement of the buffer in the direction of the rails and a jamming body arranged loosely within said expanded section of the buffer.

3. A slidable railroad-buffer construction comprising a buffer proper, a plurality of guide members, a plurality of ways secured to said buffer and slidably mounted on said guide members, and jamming devices arranged to automatically jam said buffer when sliding in one direction and to automatically give it free movement when sliding in the opposite direction.

4. A slidable railroad-buffer construction comprising a buffer proper, a plurality of guide members, a plurality of guide ways each having an expanded section secured to said buffer and slidably mounted on said guide members, and jamming devices arranged within the expanded sections of said guide ways and adapted to automatically jam said buffer when sliding in one direction and to automatically give it free movement when sliding in the opposite direction.

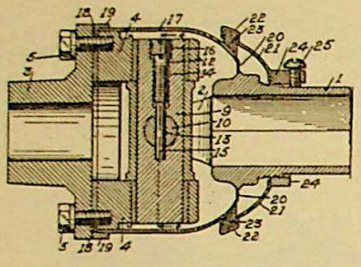
5. A slidable railroad-buffer construction comprising a buffer proper, track rails, a plurality of guide ways each having an expanded section secured to said buffer and slidably mounted on said track rails, and jamming devices arranged within the expanded sections of said guide ways and adapted to automatically jam said buffer when sliding in one direction and to automatically give it free movement when sliding in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,204,190. UNIVERSAL JOINT. BERT O. RHODES, Kalamazoo, Mich., assignor to Acme Universal Joint Company, Kalamazoo, Mich. Filed Feb. 17, 1916. Serial No. 78,920. (Cl. 74—19.)

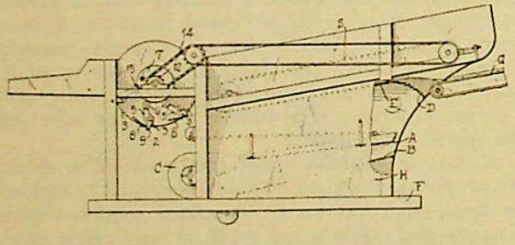
1. The combination of shaft members provided with journal pin bearing openings, a journal member provided with journal pin openings disposed at right angles to each other, the diameter of one opening exceeding that of the other, journal pins disposed in said journal pin openings, the larger pin being provided with a transverse hole registering with the smaller pin opening of said journal member, said smaller pin being disposed therethrough, said larger pin having a stepped longitudinal bore extending from one end through its said transverse journal pin hole, the smaller pin being provided with a transverse hole registering with said bore, a locking pin threaded into said

bore to project through the hole in said smaller pin, and a locking plug threaded into said bore to engage the end of said locking pin and constituting a locking means therefor.



2. The combination of shaft members provided with journal pin bearing openings, a journal member provided with journal pin openings disposed at right angles to each other, the diameter of one opening exceeding that of the other, journal pins disposed in said journal pin openings, the larger pin being provided with a transverse hole registering with the smaller pin opening of said journal member, said smaller pin being disposed therethrough, said larger pin having a longitudinal bore, the smaller pin being provided with a transverse locking pin hole registering with said bore, a locking pin threaded into said bore to engage said locking pin hole in said smaller pin, and a locking plug threaded into said bore to lock said locking-pin.

1,204,191. THRESHING-MACHINE. GEORGE W. RIVERS, Aberdeen, N. C., assignor to Charles N. Brasington, Bennettsville, S. C. Filed July 5, 1916. Serial No. 107,561. (Cl. 130—27.)



1. In a threshing machine, a concave including a rock shaft, teeth extending therefrom, and means for intermittently rocking the shaft.

2. In a threshing machine, a concave including a rock shaft, teeth extending therefrom, means for intermittently rocking the shaft, and means for normally maintaining the teeth in substantially a vertical position.

3. In a threshing machine, a concave including a plurality of teeth mounted for rocking movement, and automatic means for intermittently rocking the teeth.

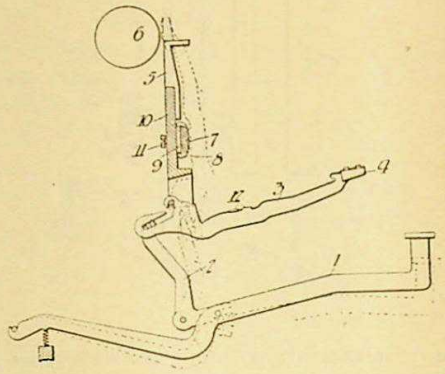
4. In a threshing machine, a concave including a rock shaft, teeth extending therefrom, a rock arm fixed to the shaft, a driven cam, means for maintaining the arm in engagement with the cam, said cam and last named means serving to intermittently rock the shaft.

5. In a threshing machine, a concave including a rock shaft, teeth extending therefrom, a rock arm fixed to the shaft, a driven disk provided in its periphery with a recess, and means for constantly maintaining the rock arm in contact with the periphery of the disk, said recess and last named means serving to intermittently rock the shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,204,192. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 2, 1914. Serial No. 835,791. (Cl. 197—183.)

1. In a typewriting machine, the combination with a platen, of a type-bar, an operating key therefor, and a noise-deadening stop of slightly compressible material arranged in the path of the type-bar and in position to arrest the stop-engaging portion of the type-bar before the type thereon reaches the platen, and permitting the type to be carried by momentum to the platen after the stop-engaging portion is arrested, the type-bar formed with broad soles projecting at opposite sides of the type-bar and presenting a large stop-engaging surface to prevent the type-bar from wearing or cutting into said stop.



2. In a typewriting machine, the combination of a platen, a series of type-bars formed of resilient material and arranged to swing to the platen, keys for individually operating the type-bars, and a stop consisting of sound-deadening material positioned to arrest the type-bars before the types carried thereon reach the platen, said type-bars having broad soles arranged to impact with relatively large areas of the stop when engaging the latter, said soles arranged on each side of the type-bars in staggered positions, the resistance of the stop being sufficient to bring the impacting portions of the type-bars to a full stop before the types reach the platen, the resiliency of the type-bars permitting the types to be carried by momentum to the platen.

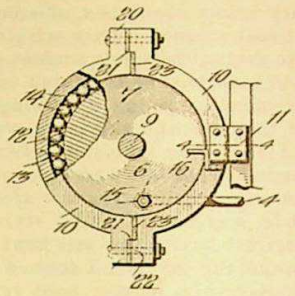
3. In a typewriting machine, the combination with a platen, of a type-bar arranged to be swung against the platen, a compressed felt stop in the path of the type-bar and positioned to arrest the type-bar as it nears the printing position, the type-bar being formed with a broad sole arranged to strike the stop and thereby present the type-bar from cutting into the stop, the latter operative to arrest the swinging movement of the type-bar, bringing the stop-engaging portion thereof to a full stop before the type strikes the platen, and a retainer provided with claws to hold the material of said stop in position.

4. In a typewriting machine having a platen, a series of type-bars arranged to swing toward said platen, and a cushioning stop in the path of movement of said type-bars, to be struck by them just before the types thereon make impact with said platen, adjacent type-bars having staggered enlarged surface-contacting portions for engagement with said stop, the area of said contacting portions being sufficient to limit the compression of the stop due to the impact of the type-bars and bring said contacting portions to a stop before the types make impact with the platen.

5. In a typewriting machine having a platen, the combination of a pivoted type-bar carrying a type to swing to printing position at the platen, said type-bar formed of springy material, and a stop of sound-deadening material in the path of the type-bar and positioned to be engaged by the type-bar as the type nears the printing position, the stop-engaging portion of the type-bar being nearer to the pivot than to the type, said stop being formed of nearly solid material and having a solid backing, whereby said stop-engaging portion of the type-bar is brought to a stop before the type reaches the printing position, the type stroke being completed by momentum; the type-bar having enlarged stop-engaging surfaces projecting beyond the opposite sides of the body of the type-bar.

[Claims 6 to 11 not printed in the Gazette.]

1,204,193. STEERING-GEAR FOR MOTOR-VEHICLES. GEORGE R. ROSENBERG. White Cloud, Mich. Filed Mar. 13, 1916. Serial No. 83,912. (Cl. 74—79.)



1. The combination with the steering post of a motor vehicle, of a circular disk rigidly secured to the lower end of the post and perpendicular thereto, a crank pin projecting from the lower face of the disk intermediate its axis and its circumference, said disk having an annular peripheral groove, a stationary annulus or cage surrounding said disk and perpendicular to the steering post and having an annular groove in its inner face complementary to the peripheral groove of the disk, a circular series of anti-friction bodies running partly in each of said grooves and rotatably supporting the disk within the annulus, a steering rod having a flexible connection at one end with the crank pin and flexibly connected at its opposite end with the drag link of the steering gear of the vehicle.

2. The combination with the steering post of a motor vehicle comprising a drag link, a circular disk rigidly mounted at the lower end of the steering post and perpendicular thereto, an annulus or cage surrounding the disk in a coincident plane, said disk rotatably held within the annulus, a stop projecting from the face of the disk and means connecting steering post and drag link and controlled by said stop whereby the oscillation of the steering post will change the angularity of the steering wheels of the vehicle through the disk and surrounding annulus and such oscillation be limited by the aforesaid stop.

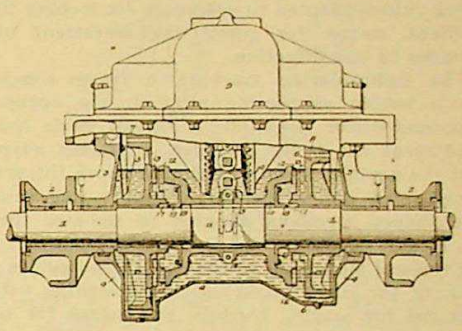
3. The combination with the steering post of a motor vehicle including a drag link, of a circular disk rigidly secured to the lower end of the post and perpendicular thereto, a crank pin secured to said disk and projecting from the lower face thereof intermediate its axis and circumference, a stationary annulus or cage having a circular opening and surrounding said disk, the periphery of the disk and the annulus having grooved coöperation whereby the annulus supports and permits rotation of the disk, a steering rod having flexible connection at one end, with said crank pin and at its opposite end having flexible connection with the drag link of the steering gear of the vehicle.

4. The combination with the steering post of a motor vehicle comprising a drag link, of a circular disk rigidly secured to the lower end of the post and perpendicular thereto, a crank pin projecting from the lower face of the disk intermediate its axis and circumference, a projection on the upper face of the disk, a stationary annulus surrounding said disk and rotatably supporting the same, a stop on said annulus adapted to coöperate with the projection on the upper face of the disk to limit rotation of the disk, a steering rod having flexible connection at one end with said crank pin and at its opposite end having flexible connection with the drag link of the steering gear of the vehicle.

5. The combination with the steering post of a motor vehicle including a drag link, of a circular disk rigidly secured to the lower end of the post and perpendicular thereto, a crank pin projecting from the lower face of the disk intermediate its axis and circumference, a stationary annulus having a circular opening surrounding said disk and within which said disk is rotatably supported, said annulus consisting of coöperating separable members, means carried by said members and coöperating to prevent relative movement of the same, a steering rod having flexible connection at one end with the crank pin and at its opposite end having flexible connection with the drag link of the steering gear of the vehicle.

[Claim 6 not printed in the Gazette.]

1,204,194. MEANS FOR LUBRICATING CLUTCHES. KENNETH RUSHTON, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 18, 1916. Serial No. 85,089. (Cl. 192—1.)

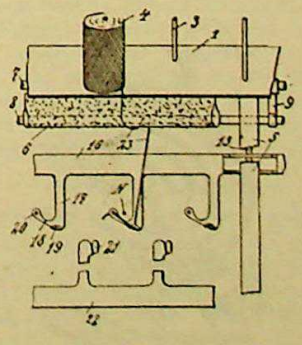


1. The combination in a clutch, of a shaft; a wheel loosely mounted on the shaft and having a cavity in one end of the hub; a clutch sleeve mounted on the shaft and arranged to be moved into contact with the wheel, said sleeve having a plunger adapted to enter the cavity and to force the entrapped lubricant into the bearing between the wheel and the shaft.

2. The combination in clutch mechanism, of a shaft; two hubs loosely mounted on the shaft and spaced apart; a clutch sleeve located on the shaft and arranged to move longitudinally thereon; a plunger on each end of the clutch sleeve; and a cavity in each hub into which the plunger is arranged to enter when the sleeve is moved toward the hub.

3. The combination in clutch mechanism, of a shaft; bearings for the shaft; a casing containing lubricant; two wheels loosely mounted on the shaft and spaced apart and located in the casing; a sleeve mounted to turn on the shaft and located between the two wheels; clutch teeth on each wheel and clutch teeth on the ends of the sleeve arranged to engage the teeth of the wheels; and an annular cavity in the inner end of the hub of each wheel and an annular plunger secured to each end of the sleeve and arranged to enter the cavities in the hubs of the wheels when the clutch sleeve is moved longitudinally on the shaft.

1,204,195. DEVICE FOR EMBELLISHING EMBROIDERY. ISIDOR SCHEFFKNECHT, Lustenau, Austria-Hungary, assignor to Karl Fenkart, Rorschach, Switzerland. Filed Feb. 27, 1913. Serial No. 751,134. (Cl. 112—7.)



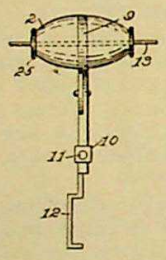
1. In an embroidering machine, a bobbin supporting plate, a brake cylinder supported below the bobbin supporting plate, a thread guide rod associated with the brake cylinder, a bar supported below the bobbin supporting plate, thread guides comprising depending hook members integral with the bar, a guide lug on each hook mem-

ber, a movable bar operating under the first mentioned bar, festoon hooks carried by the second mentioned bar, said feston hooks adapted to coöperate with the thread guides for looping the thread and carrying the same before a needle, said thread adapted to be fed over the brake cylinder.

2. In an embroidering machine, a bobbin supporting plate, a brake cylinder under the bobbin supporting plate, a thread guide rod pivotally supported adjacent the brake cylinder, thread guides under the thread guide rod, a movable arm carrying festoon hooks, said festoon hooks and thread guides adapted to coöperate for looping thread, and resilient means for permitting movement of the thread guides in one direction.

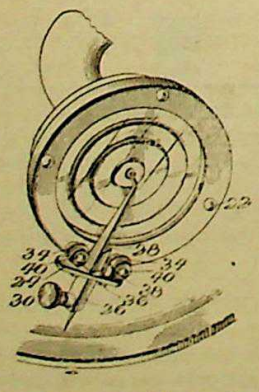
3. In an embroidering machine, a frame comprising uprights, a bobbin supporting plate on the uprights, a brake cylinder under the plate, a thread guide rod supported adjacent the brake cylinder, a bracket supported by one of the uprights, a pin extending above the bracket, a bar supported under the thread guide rod, said bar having U-shaped members adapted to embrace the pin, resilient means engaging the U-shaped members for restricting vertical movement of the bar, thread guides forming a part of the bar, festoon hooks coöperating with the thread guides for looping threads, and means for sewing the looped portions together.

1,204,196. ADJUSTABLE SUPPORT FOR INSULATORS. RUDOLPH W. SCHULZ, Waterloo, Iowa. Filed Aug. 24, 1914. Serial No. 858,210. (Cl. 189—33.)



A device of the character described, comprising a support, a cross-bar, downwardly-inclined brackets on said cross-bar, a split-ring mounted on the lower ends of said brackets and adapted to encircle said support, ring-parts mounted on said cross-bar above said split-ring and adapted to embrace the support thereabove, rigid connections between the ring-part ends on each side and the split-ring ends on the same sides, and means for adjustably securing said rigid connections together to clamp the split-ring and ring-parts adjustably upon said support.

1,204,197. SOUND-BOX. LOUIS K. SCOTFORD, Chicago, Ill. Filed Apr. 30, 1915. Serial No. 24,991. (Cl. 274—35.)



1. The combination, in a sound box, of a box proper having a flange at the rear thereof, a back within the box with its rear surface facing the inner surface of said flange, said flange and said back having a pin and an opening, the pin on one part projecting into the opening in the other, and sound absorbing material between the inner surface of the flange of said box and the outer surface of said back and surrounding said pin.

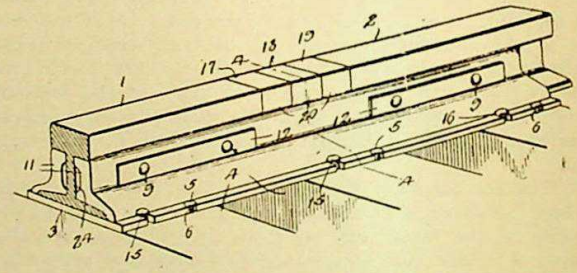
2. The combination, in a sound box, of a box proper having a flange at the rear thereof, a back within the box having its rear surface facing the inner surface of said flange, said flange and said back having a pin and opening the pin fitting within the opening, sound absorbing material between the edge of the back and the inner wall of the box proper, and sound absorbing material between the inner surface of the flange of said box and the outer surface of said back, said material surrounding the aforesaid pin.

3. In a sound box, a cross bar, and a stylus bar formed of one piece of material having one end bent to be secured to the diaphragm and the other end formed of triangular shape adapted to receive a needle, said triangular part extending on both sides of said cross bar.

4. In a sound box, a cross bar, and a stylus bar formed of one piece of material having one end bent to be secured to the diaphragm and the other end formed of triangular shape adapted to receive a needle, said triangular part extending on both sides of said cross bar and having an opening at each end whereby it may be loaded at the rear end.

5. The combination, in a sound box, of a cross bar having securing members thereon, projecting parts on said cross bar, collars secured between said projecting parts and said securing members, one of said last named parts being adjustable.

1,204,198. RAILROAD-TRACK CONSTRUCTION. HARVEY E. SCOTT and ABNER L. SCOTT, Alleene, Ark. Filed Mar. 18, 1916. Serial No. 85,190. (Cl. 239—3.)



1. The combination with two connected rails, of members arranged between the rail ends, links connected with said members and rails and actuated by the contracting of the rails to move said members an equal distance away from each other and from the ends of the rails.

2. The combination with two rails having opposing ends, of members arranged between the rail ends and alining with the heads of the rails, and means connected with the rails and the members and actuated by the contracting of the rails for moving said members an equal distance away from each other and from the ends of the rails, and angle plates connected with the rails and contacting with said members to support the same.

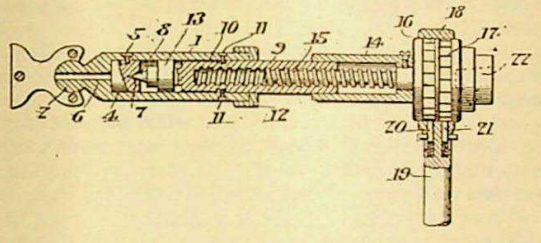
3. The combination with two rails having opposing ends in spaced relation, of a plurality of members interposed between the ends of the rails and provided with heads alining with the heads of the rails, angle plates connected with the rails and contacting with the heads on the said members and providing a guideway in which said members may slide, and means connected with said members and the ends of the rails for imparting a sliding movement thereto when said rails contract or expand.

4. The combination with two rails having opposing ends in spaced relation, of a plurality of members interposed between the opposing ends of the rails, pins carried by said members, angle bars connected with the rails and having their inner faces contacting with the pins to hold said members in alinement and slotted links connected with said members and rails whereby said rails upon expanding or contracting may move independently of said members.

5. The combination with two rails having opposing ends in spaced relation, of a plurality of members interposed between the opposing ends of the rails, and each comprising a head, a base and a web connecting said base, pins extending laterally from the web on each member, slotted links connected with the members and rails adapted to communicate sliding movement to the members when the rails expand or contract, and grooved angle plates connecting the rails and coacting with the pins on the members and coacting with the webs on the rails and members to provide a housing for said links.

[Claims 6 and 7 not printed in the Gazette.]

1,204,199. RATCHET-DRILL. JAMES M. SHERMAN, Houston, Tex. Filed Dec. 14, 1915. Serial No. 66,877. (Cl. 77—45.)

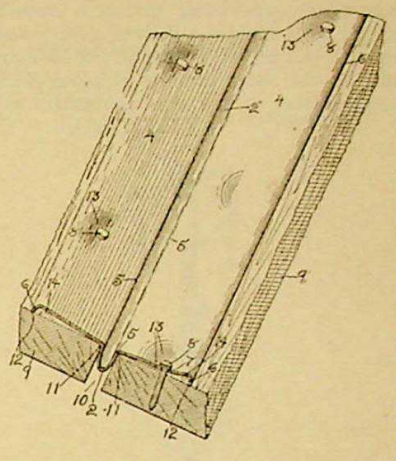


1. In a ratchet drill, the combination, a head including a tubular body having a screw extending centrally therethrough, a screw barrel receiving the screw and having its outer end provided with a center, a cylindrical member receiving the screw barrel and the center, a center support within the screw barrel having a socket to receive the point of the center, means for removably securing the center support within the said cylindrical member and said member being provided with a central slot whereby an instrument may be inserted to remove the center through the open end of the cylindrical member when the securing means for the center have been removed.

2. In a ratchet drill, the combination, a head having a longitudinally extending tubular body and a feed screw extending centrally through and projecting beyond the said body, a screw barrel receiving the screw, said screw barrel having its outer end provided with a center having a cone-shaped point, a cylindrical member having an open end to receive the screw barrel and the center point thereof, means for securing the screw barrel to the cylindrical member to permit of a slight reciprocatory movement and a complete rotary movement of the screw barrel with relation to the cylindrical member, an anti-frictional sleeve in the cylindrical member and engaging with the center, a center support removably secured in the cylindrical member and engaging with the inner wall of the bore thereof and having a cone-shaped socket to receive the cone-shaped end of the center, and said cylindrical member having its outer end closed and formed with a longitudinal slot which communicates with the bore thereof, as and for the purpose set forth.

1,204,200. SHEET-METAL BOARD-ROOF BATTEN. DARIUS E. SHRAUGER, Atlantic, Iowa. Filed July 3, 1916. Serial No. 107,307. (Cl. 108—12.)

1. In a roof construction, fixed roof boards spaced apart, in combination with a sheet-metal batten having a portion bent downwardly to form a longitudinal central open gutter on its face and a corresponding rigid wedge-shaped rib on its back forced into the space between said boards to crush the adjacent angles thereof and form water-tight joints at each side of said rib, opposite plain longitudinal side portions of the batten inclined inwardly and downwardly to the intervening gutter and each having a longitudinal central row of perforations, flanges standing downwardly along the outer edges of the plain side portions to support their elevated outer edges and to form a narrow seat and crush joint at the outer edges of the batten on the face of said roof boards, and attaching nails driven through said perforations into said boards to spring the plain side portions flatwise to elastically retain the batten seated on said crush joints.



2. In a roof construction, fixedly attached roof boards spaced apart, in combination with a sheet-metal batten having a portion bent to form a central longitudinal open gutter on its face and a corresponding curved-sided wedge-shaped rigid rib on its back, said rib forced into the space between the fixed boards to crush the adjacent sharp angles thereof and form water-tight joints at both sides, plain side portions of the batten disposed at both sides of the gutter, and attaching nails driven through said side portions into the fixed boards.

3. A roof batten, comprising a sheet-metal strip having a portion bent to form a central longitudinal open gutter on its face and a corresponding rigid wedge-shaped rib on its back, said rib adapted to be forced into a space between two fixed roof boards to crush the adjacent sharp angles thereof and form water-tight joints, plain portions at each side inclined downwardly to the intervening gutter and having perforations centrally of their width, downwardly-bent flanges on the outer edges to support the elevated outer edges of the plain portions and the thin flange edges adapted to seat on the face of the roof boards to form crush water-tight joints thereon, the perforations of the inclined plain portions adapted to receive attaching nails driven through into the subjacent roof boards to spring said plain portions flatwise to elastically retain the batten seated against said crush joints.

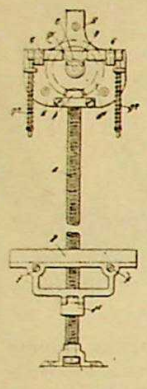
4. A sheet-metal roof batten, comprising a single strip having a portion bent to form a curved open gutter along the longitudinal center of the face of the batten and to form a corresponding rigid wedge-shaped rib on the back of the batten adapted to be driven into a space between two roof boards to crush the inner upper angles thereof and form crush-joint seats on both boards, and plain longitudinal side portions at the sides of said gutter adapted to be nailed to the face of the subjacent boards.

5. A roofing batten, comprising a sheet-metal strip having a portion bent to form a longitudinal central open gutter in the face of the batten and a corresponding rigid rib of wedge-shaped cross-section with outward curves at the base of the wedge on the back of the batten adapted to be forced into the space between two roof boards to crush the adjacent sharp angles thereof and form water-tight joints with both boards.

1,204,201. MEANS FOR RAISING AND LOWERING VEHICLE AND OTHER WINDOWS. ALFRED SPEIGHT, Wimbledon Park, England, assignor of one-half to John Hall & Sons (Bristol & London) Limited, Bristol, England. Filed Jan. 29, 1916. Serial No. 75,095. (Cl. 16—53.)

1. In window operating apparatus, a spring controlled window gripping device, a winding spindle adapted to raise the said device against the action of its spring, window raising and lowering mechanism operated by the winding spindle, and a lost motion device between the said mechanism and the winding spindle.

2. In window operating apparatus, a spring-controlled window gripping device, raising and lowering mechanism, a winding spindle operating the said mechanism, means for giving the said spindle a limited axial movement at the beginning and end of its rotation, and a connection from the spindle to the said window gripping device, adapted to release the latter by the axial movement of the spindle.



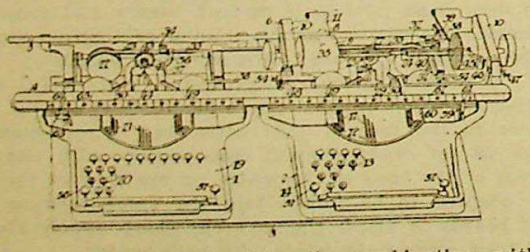
3. In window operating apparatus, a vertical screw supporting the window, a sleeve geared to the said screw, a winding spindle adapted to slide and to turn to a limited extent in the said sleeve under the control of V-shaped surfaces, and a window retaining device released by the spindle on its sliding movement.

4. In window operating apparatus, a vertical screw a window support mounted on the screw, a winding spindle actuating the said screw on turning through a lost motion connection, a window gripping fillet adapted to press against the window surface under spring control and a connection from the winding spindle to the fillet, adapted to raise the latter from the window during the lost motion of the spindle.

5. In window operating apparatus, a vertical screw, a window support carried by the screw, a winding spindle actuating the said screw, means for giving the said spindle an axial movement at the beginning and end of its rotation, a window gripping fillet and a lever connection between the fillet and winding spindle operated only by the axial movement of the latter to release the fillet.

[Claim 6 not printed in the Gazette.]

1,204,202. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 16, 1914. Serial No. 812,433. (Cl. 197—5.)



1. In a typewriting machine, the combination, with a carriage; of mechanism for effecting a letter-feeding movement of the carriage in one direction; a bank of keys for actuating said mechanism; mechanism separate from the first named mechanism for effecting a letter-feed movement of the carriage in the opposite direction; and a bank of keys separate from the first-named bank for actuating the second-named mechanism.

2. In a typewriting machine, the combination, with a carriage arranged to travel in either direction; of means to drive the carriage; letter-feed mechanism to control the movement of the carriage in one direction; and letter-feed mechanism independent of and remote from the first-named mechanism to control the movement of the carriage in the opposite direction.

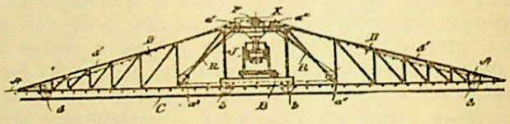
3. In a typewriting machine, the combination with a traveling carriage arranged to travel in opposite directions, of two sets of types, means for driving the carriage, means actuated by the types of one set of controlling the letter-feed movement of the carriage in one direction, and means actuated by the types of the other set for controlling the letter-feed movement of the carriage in the reverse direction.

4. In a typewriting machine, the combination with a traveling paper carriage arranged to travel in opposite directions, of means to drive the carriage, two sets of types comprising the characters of two languages in which the lines are written in opposite directions, a set of type keys for each set of types, letter-feeding mechanism actuated by one set of type keys for controlling the travel of the carriage in one direction, and letter-feeding mechanism actuated by the type keys of the other set for controlling the movement of the carriage in the opposite direction.

5. In a typewriting mechanism, the combination with a plurality of type systems, of means for letter-spacing a work-sheet in one direction when the types of one system are actuated, and means for letter-spacing a work-sheet in the reverse direction when the types of the other system are actuated.

[Claims 6 to 31 not printed in the Gazette.]

1,204,203. CONVEYING AND LOADING APPARATUS. FRANCIS LEE STUART, Baltimore, Md. Filed May 12, 1916. Serial No. 96,988. (Cl. 193—25.)



1. The combination with a main conveyer-belt of a delivery apparatus comprising a truck movable to the point of delivery, a turntable thereon, an oscillating frame supported on the turntable, a delivery conveyer carried by the oscillating frame and mounted to be projected or extended therefrom in either direction, and a hopper receiving material from the main conveyer-belt and discharging upon said extensible delivery conveyer.

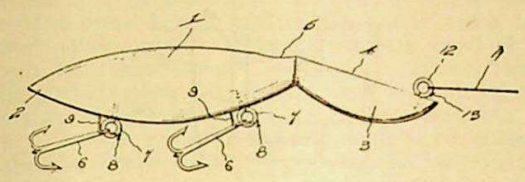
2. The combination with a main conveyer-belt, of a truck movable to the point of delivery and connected at each end with an inclined frame supporting a loop of the main conveyer-belt, a horizontally arranged delivery conveyer receiving material from either of said loops, and means for adjusting the delivery conveyer about both a horizontal and a vertical axis.

3. The combination with a main conveyer-belt, of a truck movable to the point of delivery and connected at each end with an inclined frame supporting a loop of the main conveyer-belt, a horizontally arranged delivery conveyer receiving material from either of said loops, means for adjusting the delivery conveyer about both a horizontal and a vertical axis, and motor mechanism carried by the truck and operatively connected with the looped portions of the main conveyer-belt for driving it.

4. The combination with a main conveyer-belt, of a delivery apparatus comprising a truck movable to the point of delivery, a turntable thereon, an oscillating frame supported on the turntable, a delivery conveyer carried by the oscillating frame and mounted to be projected or extended therefrom in either direction, means for moving said delivery conveyer in either direction relatively to the feed and a hopper receiving material from the main conveyer-belt and discharging upon said extensible delivery conveyer in whichever direction it is moved.

5. The combination with a main conveyer-belt, of a truck movable to the point of delivery and connected at each end with an inclined frame supporting a loop of the main conveyer-belt, a horizontally arranged delivery conveyer receiving material from either of said loops, means for driving said delivery conveyer in either direction, and means for adjusting the delivery conveyer about a horizontal and a vertical axis.

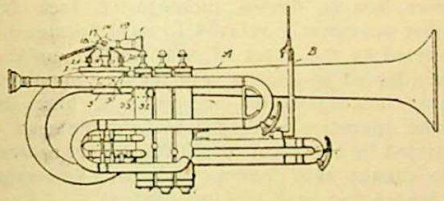
1,204,204. ARTIFICIAL BAIT. GEORGE F. STRUBE, Chicago, Ill. Filed Feb. 16, 1916. Serial No. 78,646. (Cl. 43—30.)



1. In an artificial bait, a substantially ellipsoidal body having a tail end pointed, a forwardly extending substantially semi-ellipsoidal projection formed upon the forward end of said body, the upper surface of said projection being flattened and extending downwardly from the point of connection with the body at an incline with respect to a horizontal plane, said body being provided with a concaved portion in its supper surface extending rearwardly from the line of connection between the body and said projection.

2. In an artificial bait structure, the combination, of a substantially ellipsoidal body, a plurality of eye screws attached to said body, a plurality of grappling fish hooks loosely connected to the eyes of said eye screws, wires connected to said body and extending outwardly therefrom, said wires having transversely extending rings formed upon their outer end which encompass the eyes of said eye screws and hooks for limiting the movement of the hooks toward the body.

1,204,205. ILLUMINATING DEVICE FOR MUSICAL INSTRUMENTS. ROBERT L. TATE, Atlanta, Ga., assignor of one-half to Wm. J. Hartley, Atlanta, Ga. Substitute for application Serial No. 873,190, filed Nov. 19, 1914. This application filed Feb. 15, 1916. Serial No. 78,470. (Cl. 240—2.)



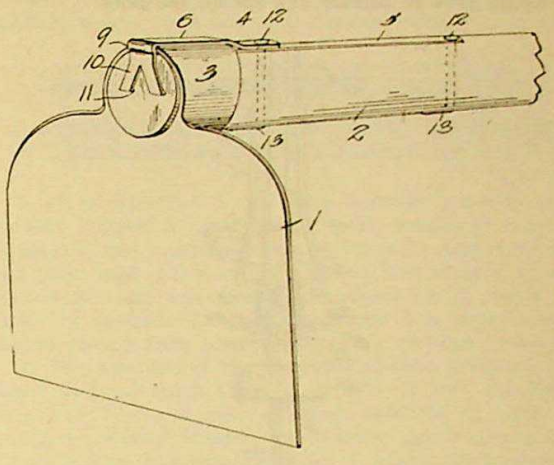
1. A device of the character described comprising a base, a hollow support mounted on the base and formed of a lower stationary section and an upper rotatable section, a hollow member extending through the sections for connecting the sections to each other, a lamp supporting arm carried by the rotatable section, a conducting wire extending through the hollow connecting member, and means for normally holding the rotatable section against rotation.

2. A device of the class described comprising a base, a support mounted on the base, attaching means carried by the base, an arm carried by the support, an incandescent light carried by the arm, socket members carried by the base, conducting wires having connection with the socket members, a switch located in spaced relation with the base, attaching means carried by the switch, an electrical connection between the switch and one of the socket members, and a second electrical connection between the switch and the incandescent light.

1,204,206. HOE. WILLIAM P. THOMASON, Ellerslie, Ga. Filed Mar. 6, 1916. Serial No. 82,435. (Cl. 55—5.)

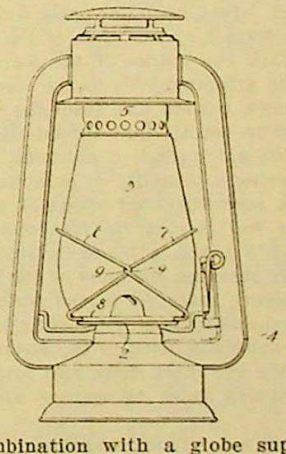
1. The combination with a hoe handle, a blade, and the sleeve on the handle, of a retaining device comprising parallel perforated straps one of which is passed between the sleeve and handle, and the other one over the sleeve, and fastening means in the perforated straps for holding said straps to the hoe handle.

2. The combination with a hoe blade, its sleeve, and a handle, of an attachment having a head with bent prongs driven into the end of the handle and a pair of perforated straps, one of which is passed under the sleeve, and the



other one over the sleeve, and nails driven through said straps and handle and clenched at the underside of the handle.

1,204,207. GUARD FOR LANTERNS. ROBERT P. THRONE, Syracuse, N. Y., assignor to R. E. Dietz Company, New York, N. Y. Filed July 1, 1915. Serial No. 37,470. (Cl. 240—32.)



1. The combination with a globe support, of a wire guard secured to the same and comprising opposite side portions rising from said support and adapted to embrace opposite sides of a globe, the said side portions having integral parts theerof interlocked with each other between their upper portions and said support.

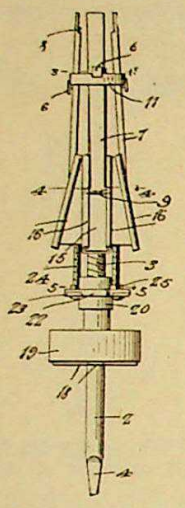
2. The combination with a globe support, of a wire guard comprising opposite bowed portions, the lower extremities of which are secured to the globe support, said bowed portions being bent toward each other to cross and interlock intermediate of the upper and lower portions thereof.

3. The combination with a globe support, of a wire guard having lower portions secured to the globe plate and upwardly extending portions encircling the lantern globe, the intermediate portions of said guard having substantially V-shaped bends located between the upper and lower portions thereof which interlock with each other.

1,204,208. ADJUSTABLE SET-WRENCH. JOSEPH J. THULL, Boyd, Wis. Filed Apr. 28, 1916. Serial No. 94,140. (Cl. 81—113.)

1. An adjustable set wrench comprising a rod, a squared ring secured to one end of said rod, two pairs of pivot pins formed on the ring, and each pair of pivot pins arranged in different planes, gripping jaws provided with openings to receive the pivot pins, and a split ring surrounding the gripping jaws and interlaced with the pairs of pivot pins, a block slidably mounted on the rod and in

engagement with the gripping jaws, and means for moving the block toward and from the pivot point of the gripping jaws to retract and spread the jaws.



2. An adjustable set wrench comprising a rod, a plurality of gripping jaws pivotally secured to one end of the rod, a block slidably mounted on said rod, said block provided with inclined jaw spreading faces, metallic strips secured to the inclined jaw spreading faces of the block and provided with edges bent upwardly and inwardly to form guides, lugs formed on the ends of the gripping jaws and disposed within the guides of the metallic strips to slidably secure the gripping jaws to the block, and means for moving the block toward and from the pivot point of the gripping jaws to retract and spread the jaws.

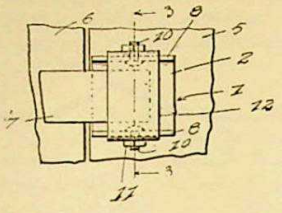
3. An adjustable set wrench comprising a rod, means for pivotally securing a plurality of gripping jaws to one end of said rod, a screwthreaded extension formed on the other end of the rod having its free end reduced and squared to receive a brace, a block slidable on said rod, means for slidably securing the ends of the gripping jaws to the block, a sleeve threaded to the screwthreaded extension of the rod, means for connecting said sleeve to the block, and a handle secured to the sleeve for rotating said sleeve to move the block from and toward the pivot point of the gripping jaws to retract and spread the jaws.

4. An adjustable set wrench comprising a rod, a plurality of gripping jaws pivotally secured to one end of the rod, a screw-threaded extension formed on the other end of the rod, a block slidably mounted on the rod, means for slidably securing the ends of the gripping jaws to the block, a sleeve threaded to the screw-threaded extension of the rod, a handle mounted on said sleeve, said sleeve having one of its ends bifurcated to form attaching arms secured to the handle, and means for securing the sleeve to the block.

5. An adjustable set wrench comprising a rod, a plurality of gripping jaws pivotally secured to one end of the rod, a screw-threaded extension formed on the other end of the rod, a block slidably mounted on said rod, means for slidably securing the ends of the gripping jaws to the block, a sleeve threaded to the screw-threaded extension of the rod, a handle secured to said sleeve, an enlarged portion formed on the sleeve and provided with an annular groove, a collar rotatably mounted in said groove, ears formed on said collar, and rods secured to the block and adjustably secured to the ears for connecting the sleeve to the block.

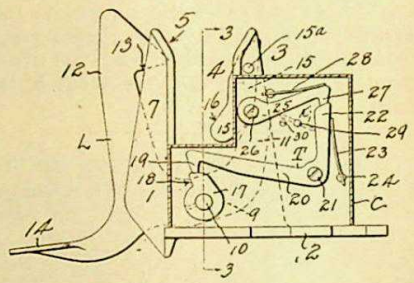
1,204,209. BOLT-KEEPER. JOSEPH J. THULL, Boyd, Wis. Filed June 17, 1916. Serial No. 104,222. (Cl. 70—15.)

1. A bolt keeper comprising a substantially U-shaped base secured to a door jamb, the leg portions thereof having elongated slots therein, bolts mounted in said elongated slots, and a substantially U-shaped member adjustably carried by the bolts for retaining a door in a closed position.



2. A bolt keeper comprising a substantially U-shaped base secured to a door jamb, the leg portions thereof provided with elongated slots, bolts mounted in said elongated slots, nuts on said bolts, a substantially U-shaped member having its legs provided with elongated slots to receive the bolts for adjusting the U-shaped member upon the U-shaped base to receive sliding bolts of varying lengths.

1,204,210. LEVER-LOCKING DEVICE. ELMER W. TIMS and JOSEPH T. MORIE, Youngstown, Ohio. Filed Apr. 7, 1916. Serial No. 89,675. (Cl. 104—25.)



1. A lever locking device including a lock frame, a latch member operatively related to said frame, a locking member carried by the pivot of said latch member, and a lock device adapted to engage said locking member.

2. A lever locking device including a lock frame, a latch member operatively related to said frame, a locking member carried by the pivot of said member, a lock device adapted to engage said locking member, and means for manually controlling said locking device.

3. A lever locking device including a lock frame, a latch member operatively related to said frame, a locking member carried by the pivot of said latch member, a locking device adapted to engage said locking member, and key operated means for controlling said locking device.

4. A lever locking device including a lock frame having a recess, a foot lever having an element adapted to form a closure for one end of said recess, a locking member carried by the pivot of said foot member, and a key controlled lever device adapted to engage said locking member.

5. A lever locking device including a lock frame having a lever clearance recess, a latch member pivoted in said frame and in operative relation to said recess, and means for locking said latch lever at its pivot.

[Claims 6 to 17 not printed in the Gazette.]

1,204,211. SILICON-CARBID REFRACTORY ARTICLE. FRANK J. TONE, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed May 6, 1913. Serial No. 765,961. (Cl. 106—9.)

1. A silicon carbid refractory article, composed of silicon carbid and a vitrified binder which is inert toward silicon carbid, the silicon carbid consisting of a variety of sizes of grains of such proportion as to give an apparent density of not less than 2.3 when pressed, said binder constituting less than ten per cent. of the article and having a vitrifying temperature of at least 1500 degrees centigrade, and said article having an apparent density of not less than 2.3.

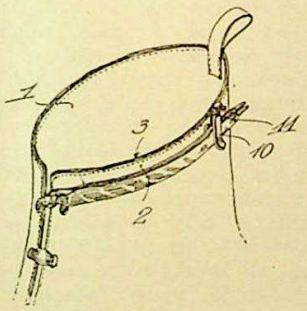
2. The herein described process of making a refractory article of silicon carbid, which consists in mixing a variety of sizes of grains of the silicon carbid in such proportion as to give an apparent density of not less than 2.3 when pressed, with a vitrifiable binder which is inert toward silicon carbid, and in a quantity which will constitute less than ten per cent. of the article, then subjecting the article to pressure, and firing it at a temperature of not less than 1500 degrees centigrade.

3. A silicon carbid refractory article, composed of a variety of different sizes of grains of silicon carbid ranging from a relatively coarse grit to a relatively fine powder, and a vitrified binder which is inert toward silicon carbid, and which has a vitrifying temperature of at least 1500 degrees C., and said article having an apparent density of not less than 2.3.

4. A silicon carbid refractory article, composed of a variety of selected sizes of grains of silicon carbid ranging in size from a relatively fine powder to relative coarse grits, and a clay binder which is inert toward the silicon carbid and which has a vitrifying temperature of at least 1500 degrees C., said article having an apparent density of not less than 2.3.

5. The herein described process of making a refractory article of silicon carbid, which consists in mixing a variety of sizes of grains of the silicon carbid ranging between 14 and 150 mesh with a clay binder which is inert toward the silicon carbid and in a quantity which will constitute less than ten per cent. of the article, then subjecting the article to pressure and firing it at a temperature of not less than 1500 degrees C., the mixture of the sizes of silicon carbid being in such proportion as to give the article an apparent density of not less than 2.3.

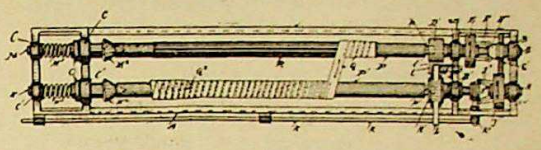
1,204,212. SHOE-LACE FASTENER. ALEXANDER F. URQUHART, Sacramento, Cal. Filed July 26, 1915. Serial No. 41,982. (Cl. 24—121.)



A lace fastener for wearing apparel comprising a piece of heavy spring metal bent in U-shape to form a body and a tongue, said body having a channel extending throughout its length in the face thereof, said tongue being of a width corresponding substantially to the width of said channel and extending from one end of the body member forming a continuation of the bottom of said channel, and having a substantially circular loop at its base beyond the end of the body with which it is connected, said tongue being offset laterally inward opposite its point of connection with the body, and being rectilinear from said offset portion throughout the greater portion of its length and normally lying in a plane parallel with the bottom of the channel in the body with the edges of the tongues normally lying in the plane of the straight body portion adjacent the edges of the channel to provide reliable clamping means between the edges of the channel and those of the tongue, and affording space between the tongue and body to receive the article to be clamped.

1,204,213. TUBE-WRAPPING MACHINE. JOHN A. VEY, Erie, Pa., assignor to Continental Rubber Works, Erie, Pa., a Corporation of Pennsylvania. Filed Apr. 1, 1916. Serial No. 88,325. (Cl. 242—7.)

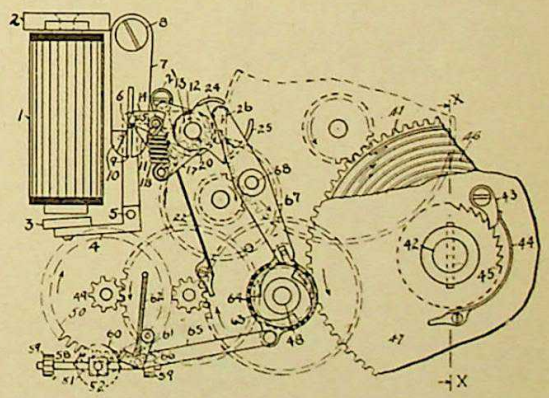
1. In a machine of the class described, a pair of poles, means to rotatably support the same in parallelism, said poles being adapted to receive a tape spirally wound thereon, and means to independently rotate said poles in opposite directions, whereby the tape is alternately and spirally wound from one to the other without traverse.



2. In a machine of the class described, means to rotatably support a tape bearing pole, means to rotatably support a tube bearing pole parallel with said tape bearing pole, said poles adapted to receive a tape spirally wound thereon, and means to independently rotate said poles in opposite directions whereby the tape is alternately wound from one to the other without traverse.

3. In a machine of the class described, a frame, a head-stock and tail-stock thereon, a pair of live spindles in said head-stock, a pair of dead spindles in said tail-stock, a spirally wound tape-bearing pole supported between a live and dead spindle, a brake mechanism associated with said live spindle, a tube-bearing pole supported between the other live and dead spindles, a pulley and associated clutch mechanism on each of said live spindles, whereby said poles may be rotated to spirally wind said tape from one to the other without traverse.

1,204,214. SIGNAL-RECORDER. LEE J. VOORHEES, Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company, a Corporation of New York. Filed June 3, 1914. Serial No. 842,690. (Cl. 164—113.)



1. In a signal recorder having an electro-magnetically controlled punching train, and a normally wound propelling train for material to be punched;—detent mechanism adapted to engage said propelling train, means frictionally moved by the propelling train to cause engagement of the detent with said train, and a connection whereby the running of the punching train will actuate the frictionally moved means to alternately cause engagement and disengagement of said detent.

2. In a signal recorder, electro-magnetic escapement mechanism, a normally wound punching train controlled thereby, a suitable propelling train for material to be perforated, detent mechanism for said propelling train, means whereby said detent mechanism may be operated by the propelling train, a cam carried by the punching train and adapted to render the detent effective at certain times independent of the action of the propelling train, and a second cam carried by the punching train and adapted to render the detent ineffective at certain other times in spite of the action of the propelling train.

3. In a signal recorder having a punching train comprising electromagnetic escapement mechanism for releasing it for a predetermined cycle of operation, and a normally wound propelling train for material to be punched;—controlling means adapted to be frictionally moved by the propelling train, and operating means moved by the punching train and normally permitting the

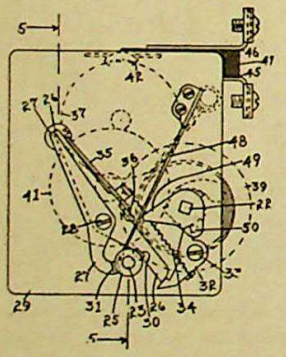
controlling means to be moved by the propelling train and adapted to cause said controlling means to move the detent to engaging position during each cycle of the punching train.

4. In a signal recorder, electro-magnetic escapement mechanism, a normally wound punching train controlled thereby, a suitable propelling train for material to be perforated, a disk moving with a shaft of said propelling train, a detent arm rotatably mounted in suitable relation to said disk and adapted to be moved to engage therewith, a spring so connected with the detent arm as to tend to move said arm into engagement with said disk at certain times and so that when said detent arm is moved a predetermined distance away from the disk said spring will cease to tend to move said detent arm toward said disk, suitable actuating mechanism for said detent arm controlled by both the punching and propelling trains, and a connection between said actuating mechanism and the detent arm arranged to permit relative movement between them.

5. In a signal recorder having a punching train comprising electro-magnetic escapement mechanism for releasing it for a predetermined cycle, and a normally wound propelling train for material to be punched;—controlling means adapted to be frictionally moved by the propelling train, and operating means moved by the punching train and adapted to actuate said controlling means during each cycle of the punching train, first to move the detent to engaging position and then to impart a predetermined disengaging movement to said controlling means with relation to the propelling train.

[Claim 6 to 9 not printed in the Gazette.]

1,204,215. SIGNAL-BOX. LEE J. VOORHEES, Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company, a Corporation of New York. Filed Feb. 23, 1915. Serial No. 9,963. (Cl. 177—372.)



1. A windable signaling train, an operating lever associated therewith, a flexible detent rod for said train carried by said operating lever, a holding lever adapted to prevent movement of said detent rod with the operating lever in one direction, a latch adapted to hold the operating lever in position to carry the detent out of engagement with the signaling train, a spring so connecting said latch and said operating lever as to tend to move them to their respective engaging positions, a plunger adapted to successively operate said levers when moved in one direction, a spring for moving said plunger in the opposite direction, and a frangible plate for holding said plunger against the tendency of said spring.

2. In a signal box having a frangible plate for controlling the starting thereof; a spring pressed plunger adapted to be held in compression by said frangible plate; a signaling train; two separately movable levers each adapted to independently cause said signaling train to be held against operation, said levers being adapted to such coöperation with the plunger that when said plunger is in compressed position one of said levers will be held in holding position and the other of said levers will be held in released position, and so that when said plunger has moved away from its compressed position both of said levers will be free to move either to release or to stop said train; and means controlled by the running of the train for shifting the position of both of said levers when said plunger moves away from its compressed position.

3. A windable signaling train; a detent for said train comprising a flexible resilient member having a tendency to release said train; an operating lever and a holding lever associated with said detent; means released by the running down of said train for moving the operating lever to condition said detent to stop the train; a starting member adapted to be manually moved to set the operating lever to permit the detent to disengage said train and to condition the holding lever to influence said detent to hold the train, said starting member having a tendency constantly imparted thereto when in manually set position to move said starting member to a position where it will permit the holding lever to move to allow the detent to release the train; and a lock for holding said member against manual operation so connected with said train as to be rendered ineffective only when said train is fully wound.

4. A windable signaling train, a detent for said train, an operating lever constantly tending to act to condition said detent to hold said train, a starting member adapted to be manually moved to set said operating lever to cause or permit the release of the train from said detent, a latch for holding said operating lever in set condition, a connection between said latch and the train whereby said latch will disengage said operating lever when the train is unwound, a holding lever adapted to be so operated by the starting member as to retain the detent in holding position during the movement of said starting member to set the operating lever to permit the release of the train from the detent, and a lock for the starting member constantly tending to act to hold the starting member against manual movement and so connected with said train as to release said starting member only when said train is fully wound.

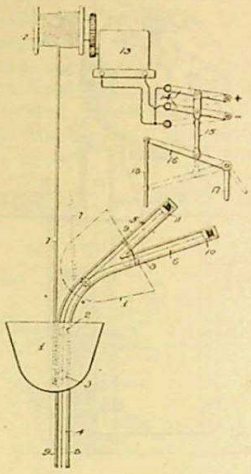
5. In a signal box having a frangible plate for controlling the starting thereof; a spring pressed plunger constantly tending to move through the plane occupied by said frangible plate; a windable signaling train; a lock for said plunger controlled by said train; a detent for said train; an operating lever movable in one direction by said plunger, carrying said detent and arranged to positively move said detent to holding position and to yieldingly move said detent to released position; a holding lever adapted to be engaged by said plunger to retain the detent in holding position, and upon the breaking of the frangible plate to be permitted to move to released position in response to the resiliency of the yielding connection between the operating lever and the detent; a latch adapted to hold the operating lever in released position and to be disengaged therefrom by the movement of a part moved by the train; and a spring so applied to said latch and said operating lever as to tend to move said latch to engaging position and to move said operating lever to holding position.

[Claims 6 to 16 not printed in the Gazette.]

1,204,216. SELF-DUMPING HOIST. JAMES R. WALKER, Niagara Falls, N. Y., assignor to Niagara Alkali Company, Niagara Falls, N. Y., a Corporation of New York. Filed July 18, 1913. Serial No. 779,797. (Cl. 214—12.)

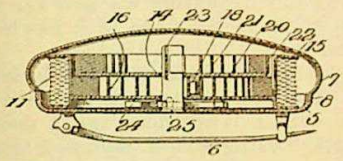
The combination, in a dumping hoist, of a bucket having guiding projections one above the other, a flanged guideway receiving both of said projections and curved forwardly at its upper end, the forward end of said curve being forked and presenting upper and lower limbs at different angles, and a hoisting rope connected to the bucket so as to move the lower portion of the same in a direction transverse to the line of the projections after the latter enter the forward curve at the top of the guide-

way, whereby the upper projection will be directed into the lower limb of the fork at the forward end of said



curve and the lower projection into the upper limb of said fork.

1,204,217. REEL-HOLDER. JOHN P. WEAVER, Terre Haute, Ind. Filed May 19, 1916. Serial No. 98,692. (Cl. 242—98.)



1. In a device of the character described, in combination, a base plate having a fixed central stud, a flanged drum loosely mounted upon said stud, a flexible member adapted to be wound thereon, a flanged holder mounted within said drum and substantially half the width thereof, and coil springs connected in tandem between the drum and the central stud about which it rotates.

2. In a device of the character described, in combination, a base plate having a fixed central stud, a flanged drum loosely mounted upon said stud upon which a flexible member is adapted to be wound, a holder of substantially half the width of said flange mounted within said flanged drum, coil springs connected in tandem on opposite sides of the holder within the drum and acting between the drum and the central stud about which it rotates, and holding means acting between the drum and the base plate adapted to hold the reel in desired position.

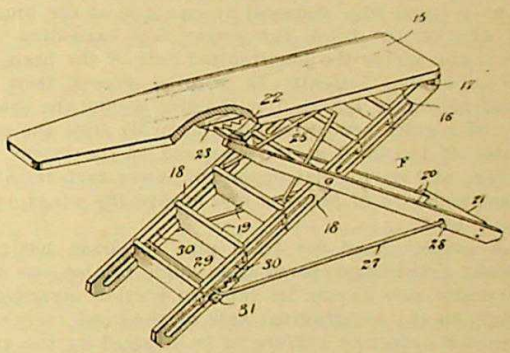
3. In a device of the character described, in combination, a base plate having a fixed central stud, a drum loosely mounted upon said stud upon which a flexible member is adapted to be wound, a flanged holder mounted within said drum, coil springs connected in tandem between the drum and the central stud about which it rotates, and holding means acting between the drum and the base plate adapted to hold the reel in desired position, said holding means comprising a pawl pivotally mounted upon the drum adapted to coact with a stud mounted upon the base plate.

4. In a device of the character described, in combination, a base plate provided with fastening means, a central stud mounted upon said base plate, a flanged drum adapted to rotate about said stud, a coil spring within said flanged drum adapted to rotate bodily about said stud, a holder resting upon said spring, a coiled spring mounted within said holder, said springs being arranged in tandem with the outer end of said first spring secured to the drum and its inner end secured to the holder, the outer end of said second spring being secured to said holder and its inner end secured to said central stud.

5. In a device of the character described, in combination, a base plate provided with fastening means, a central stud mounted upon said base plate, a flanged drum adapted to rotate about said stud, a coil spring within said flanged drum adapted to rotate bodily about said stud, a flanged holder resting upon said spring, a coiled spring mounted within said holder, said spring being arranged in tandem with the outer end of said first spring secured to the drum and its inner end secured to the holder, the outer end of said second spring being secured to said holder and its inner end secured to said central stud, and locking means operating between the base plate and the holder adapted to hold the reel in any desired position of winding.

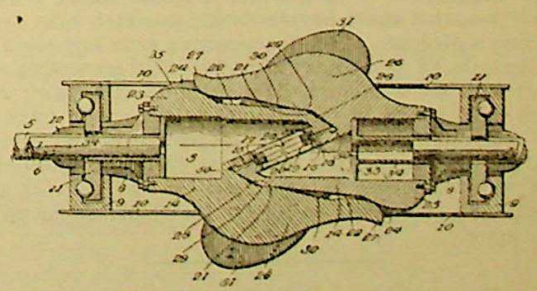
[Claim 6 not printed in the Gazette.]

1,204,218. COMBINED IRONING-BOARD AND STEP-LADDER. HARRY P. WHITE, Albany, Oreg. Filed Feb. 9, 1915. Serial No. 7,185. (Cl. 228—32.)



An ironing board, a step ladder having side rails pivotally connected with said board, said guide rails having slots and ratchet members secured on the faces thereof adjacent the said slots, a supporting frame having side members pivoted on the side rails, a cross bar secured on the edges of the side members at one end thereof, and a cross bar extending between the side members at the other end thereof, said last mentioned cross bar lying beyond the end of the ironing board when folded, ratchet bars on the under face of the ironing board adapted to be engaged by the first mentioned cross bar, and a locking yoke having limbs pivoted on the side members of the supporting frame and a bridge piece extending through the slots in the side rails of the ladder and adapted for engagement with the ratchet members adjacent to said slots simultaneously with the engagement of the cross bar of the supporting frame with the ratchet bars on the under face of the ironing board.

1,204,219. TRAIN-PIPE COUPLING. WALTER C. WHITE, Los Angeles, Cal., assignor to International Couplers Company, Los Angeles, Cal., a Corporation of California. Filed Mar. 20, 1913, Serial No. 755,697. Renewed Feb. 7, 1916. Serial No. 76,775. (Cl. 188—13.)



1. A coupler body having a rigid guide arm extending forwardly from one side and having a front vertical edge extending the entire height of the body and spaced from said arm, a vertical face extending from said edge to the base of said guide arm, a second vertical face extending from said edge in divergent relation to the first-mentioned face, said second vertical face terminating in a vertical side disposed at a slight angle to the longitudinal axis of the body, a lateral offset on the body at the rear of said

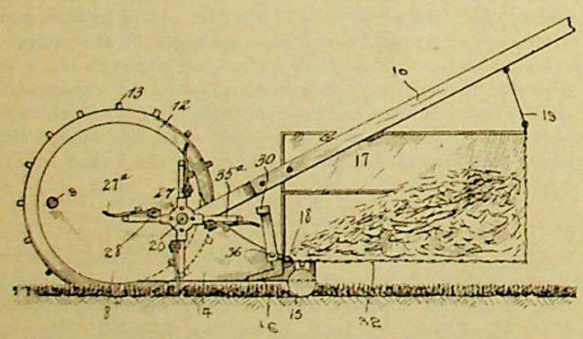
vertical side, and rearwardly converging lateral ribs at the upper and lower edges of said offset, said offset and ribs being adapted to be engaged by the guide arm of an opposed head.

2. A coupler head for train-pipe couplings having a body and a guide arm rigid with and extending forwardly from one side thereof, the outer side of the body and the inner side of the guide arm being each provided with a plurality of vertical deflecting surfaces and a vertical groove being formed at the junction of the body and the arm, the engaging deflecting surfaces on the arm and the body being arranged at slightly different angles of inclination whereby both ends of the guide arm may bind against the outer side of an opposed head with the intervening portions of the opposed surfaces out of contact.

3. A coupler head for train-pipe couplings having vertical faces of unequal length diverging rearwardly from a front vertical edge disposed at one side of the longitudinal axis of the head, the longer face extending in a single plane across the longitudinal axis of the head, flat wings extending laterally in parallel planes from the top and bottom of the head at the side having the shorter face, and a guide arm extending forwardly from the opposite side of the head at the rear end of the longer vertical face and having flat upper and lower surfaces at its rear extremity to fit between and engage the wings on an opposed head.

4. A coupler head for train pipe couplings having a forwardly extending tapered rigid guide arm on one side, the opposite side having its forward portion arranged at an angle to the longitudinal axis of the head to present an inclined deflecting surface to be engaged by the guide arm of an opposed head, a lateral offset provided on said side at the rear of said deflecting surface and having a horizontally convex outer surface, and rearwardly diverging ribs at the upper and lower edges of said offset.

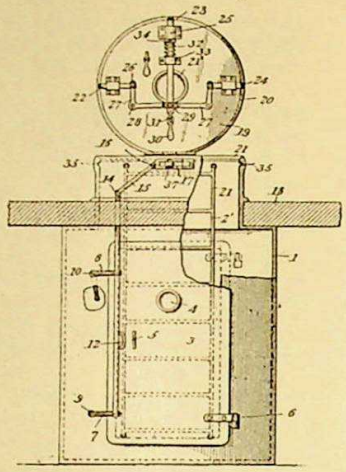
1,204,220. REVOLVING LAWN-RAKE. ARTHUR E. WHITING, Louisville, Ky. Filed Dec. 30, 1913, Serial No. 809,529. Renewed Apr. 7, 1916. Serial No. 89,727. (Cl. 55—145.)



In combination with a wheel mounted frame, a rotatively mounted shaft having fixedly mounted rake heads bearing a plurality of tooth supporting arms and tooth securing bars on said arms; a ratchet gear connecting said shaft with the master-wheel; a plurality of resilient rake teeth having coils in their medial portions, said teeth being removably secured to said securing bars and bearing against the supporting arms, a vertically positioned cleaner-bar attached to said frame in the path of said teeth and a receptacle to receive the refuse swept up by the rakes.

1,204,221. SAFETY LOCKING DEVICE FOR HATCH-DOORS. HENRY DUKE WILLIAMS, New York, N. Y. Filed May 23, 1916. Serial No. 99,462. (Cl. 114—201.)

1. A safety device for doors upon hatch chambers upon torpedo boats, etc., comprising, in combination with a hatch chamber with a lower door and a door in the top thereof, movable locking pawls mounted upon the wall of the chamber and adapted to lock said lower door closed, locking bolts upon the upper door, means for releasing said bolts, and mechanism actuated by said locking pawls for preventing the bolts from being released when the pawls are in unlocked positions.



2. A safety device for doors upon hatch chambers upon torpedo boats, etc., comprising, in combination with a hatch chamber with a lower door and a door in the top thereof, movable locking pawls mounted upon the wall of the chamber and adapted to lock said lower door closed, locking bolts upon the upper door, means for releasing said bolts, a bar pivoted to the locking pawls, and means actuated thereby for preventing the bolt releasing mechanism from being operated when the pawls are in unlocked positions.

3. A safety device for doors upon hatch chambers upon torpedo boats, etc., comprising, in combination with a hatch chamber with a lower door and a door in the top thereof, movable locking pawls mounted upon the wall of the chamber and adapted to lock said lower door closed, spring-pressed locking bolts upon the cover having pivotal connection with one another and adapted to engage notches in the wall of the hatch chamber, means upon the latter for releasing the bolts, and means actuated by the pawls for preventing said releasing mechanism being actuated when the pawls are in unlocked position.

4. A safety device for doors upon hatch chambers upon torpedo boats, etc., comprising, in combination with a hatch chamber with a lower door and a door in the top thereof, movable locking pawls mounted upon the wall of the chamber and adapted to lock said lower door closed, spring-pressed locking bolts upon the cover having pivotal connection with one another and adapted to engage notches in the wall of the hatch chamber, means upon the latter for releasing the bolts, a movable member mounted upon the wall of the chamber and having pivotal connections with said locking pawls and designed, when the latter are in unlocked positions, to be positioned in the path of said releasing member to prevent the same being operated to release the bolts.

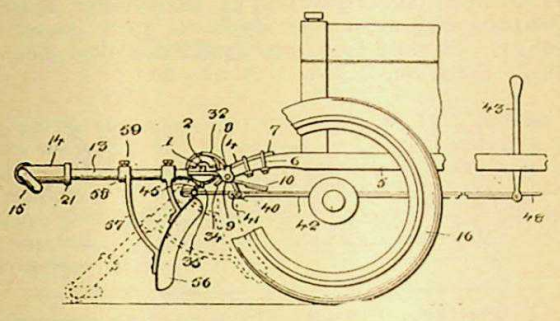
5. A safety device for doors upon hatch chambers upon torpedo boats, etc., comprising, in combination with a hatch chamber with a lower door and a door in the top thereof, movable locking pawls mounted upon the wall of the chamber and adapted to lock said lower door closed, spring-pressed locking bolts upon the cover having pivotal connection with one another and adapted to engage notches in the wall of the hatch chamber, means upon the latter for releasing the bolts, a member having an L-shaped end which is slotted to receive said member, and pivotal connections between said member and locking pawls.

[Claims 6 and 7 not printed in the Gazette.]

1,204,222. CAR-FENDER. ROBERT H. WILSON, Tacoma, Wash. Filed Feb. 16, 1916. Serial No. 78,720. (Cl. 105—130.)

1. In a car fender, the combination of a non-rotary shaft, means for supporting the same in fixed relation

to a vehicle frame, a cam mounted to oscillate on said shaft, a tubular housing inclosing said cam and mounted for oscillatory movement on said shaft, arms extending from said housing and having a fixed relation thereto, a pilot bar supported by said arms and adapted to move rearwardly when subjected to impact, an operating connection between said pilot bar and cam actuated by the pilot bar and acting to oscillate said cam, and a fender upholding latch displaceable by said cam.



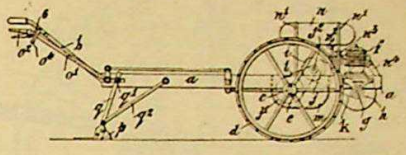
2. In a car fender, the combination of a non-rotary shaft, means for supporting the same in fixed relation to a vehicle frame, a cam mounted to oscillate on said shaft, a tubular housing inclosing said cam and mounted for oscillatory movement on said shaft, arms extending from said housing and having a fixed relation thereto, a pilot bar supported by said arms and adapted to move rearwardly when subjected to impact, an operating connection between said pilot bar and cam actuated by the pilot bar and acting to oscillate said cam, a fender upholding latch displaceable by said cam, and a spring connecting said shaft and housing and acting to depress the fender.

3. In a car fender, the combination of a non-rotary shaft, means for supporting the same in fixed relation to a vehicle frame, a cam mounted to oscillate on said shaft, a tubular housing inclosing said cam and mounted for oscillatory movement on said shaft, arms extending from said housing and having a fixed relation thereto, a pilot bar supported by said arms and adapted to move rearwardly when subjected to impact, an operating connection between said pilot bar and cam actuated by the pilot bar and acting to oscillate said cam, a fender upholding latch displaceable by said cam, a spring connecting said shaft and housing and acting to depress the fender, and means for limiting the downward movement of the fender.

4. In a car fender, the combination of a non-rotary shaft, means for supporting the same in fixed relation to a vehicle frame, a cam mounted to oscillate on said shaft, a tubular housing inclosing said cam and mounted for oscillatory movement on said shaft, arms extending from said housing and having a fixed relation thereto, a pilot bar supported by said arms and adapted to move rearwardly when subjected to impact, an operating connection between said pilot bar and cam actuated by the pilot bar and acting to oscillate said cam, a fender upholding latch displaceable by said cam, and manually operable means for displacing said latch.

5. In a car fender, the combination of a non-rotary shaft, means for supporting the same in fixed relation to a vehicle frame, a cam mounted to oscillate on said shaft, a tubular housing inclosing said cam and mounted for oscillatory movement on said shaft, arms extending from said housing and having a fixed relation thereto, a pilot bar supported by said arms and adapted to move rearwardly when subjected to impact, an operating connection between said pilot bar and cam actuated by the pilot bar and acting to oscillate said cam, a fender upholding latch displaceable by said cam, a manually operable lever for tripping said latch, a stop arm on said lever, and an adjustable stop coöperating with said stop arm and embodying a collar encircling said housing and adapted to be turned thereon, a set screw for said collar, and a shoulder on said collar adapted to contact with said stop arm.

1,204,223. SELF-CONTAINED MOTOR-DRIVEN AGRICULTURAL IMPLEMENT. ALBERT WYLES, Jr., Evesham, England. Filed Mar. 8, 1912, Serial No. 682,481. Renewed Apr. 6, 1916. Serial No. 89,473. (Cl. 97—30.)



1. A self-contained motor driven agricultural implement comprising a frame, a pair of side by side wheels supporting said frame, a tool carried by said frame in rear of the wheels, and a motor carried by said frame in front of the wheels, said motor and tool being so disposed as to substantially balance the frame in a longitudinal direction on the wheels, substantially as described.

2. A self-contained motor driven agricultural implement comprising a frame having steering handles at its rear operable by a person walking on the ground; a pair of wheels mounted side by side supporting said frame, a tool carried by said frame in rear of the wheels, and a motor carried by said frame in front of the wheels, said motor and tool being so disposed as to substantially counterbalance each other and equipoise the frame upon the wheels in a longitudinal direction, substantially as described.

3. A self-contained motor driven agricultural implement comprising an axle, a pair of wheels mounted on said axle, a frame mounted on the axle, a tool carried by said frame in rear of the axle, and a motor carried by said frame in front of the axle, said motor and tool being substantially counterbalanced and balancing the frame upon the wheeled axle.

4. A self-contained motor driven agricultural implement comprising an axle, a pair of wheels supporting said axle, a frame mounted on the axle and having a handle on its rear end operable by a person walking on the ground to guide the implement, a tool carried by said frame in rear of the axle, and a motor carried by said frame in front of the axle, said motor and tool being so disposed as to substantially counterbalance each other and balance the frame longitudinally on the wheels, substantially as described.

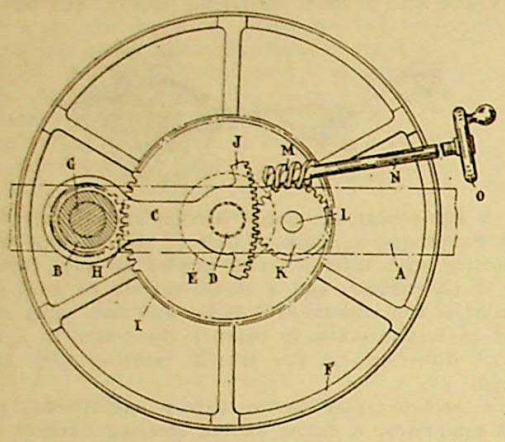
5. A self-contained motor driven agricultural implement comprising a frame having steering handles at its rear operable by a person walking on the ground, an axle supporting said frame, a pair of wheels mounted side by side on said axle, a plurality of tools carried by said frame in rear of the wheels, and a motor carried by said frame in front of the wheels, said motor and tools being so disposed as to substantially counterbalance each other and also equipoise the frame longitudinally upon the axle, substantially as described.

1,204,224. AGRICULTURAL IMPLEMENT. ALBERT WYLES, Jr., Leeds, England. Filed Feb. 25, 1913. Serial No. 750,587. (Cl. 21—114.)

1. In an agricultural implement, the combination of a frame having a projecting boss, a power shaft journaled in said frame and extending axially through the boss, a wheel support pivoted at one end on said boss and having a gear segment on its other end, a gudgeon mounted on said support, means mounted on the frame engaging said segment to adjust the support, a wheel on said gudgeon having its axis parallel with the axis of the power shaft, a gear fast on the wheel, and a pinion on the power shaft adjacent the boss meshing with the said wheel gear, substantially as described.

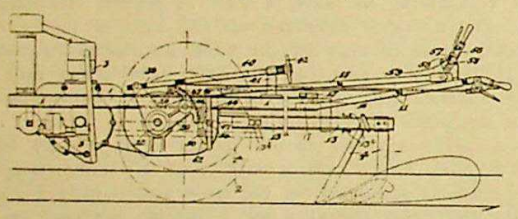
2. In an agricultural implement, the combination of a frame having a projecting boss, a power shaft journaled in said frame and extending axially through the boss, a wheel support pivoted at one end on said boss and having a gear segment on its other end, a pinion rotatably mounted on the frame and meshing with said

segment, a worm mounted on the frame and engaging said pinion; a gudgeon attached to said support, a wheel on said gudgeon having its axis parallel with the axis



of the power shaft, a gear fast on the wheel, and a pinion on the power shaft adjacent the boss meshing with the said wheel gear, substantially as described.

1,204,225. SELF-PROPELLED AGRICULTURAL IMPLEMENT. ALBERT WYLES, Jr., Leeds, England. Filed Sept. 4, 1914, Serial No. 860,247. Renewed Oct. 5, 1916. Serial No. 124,007. (Cl. 21—114.)



1. In a self-propelled agricultural implement the combination of a frame, a motor carried thereby, a road wheel driven by said motor and mounted for vertical adjustment in relation to the frame, and means whereby the force of the motor driving said wheel may at will be caused to automatically raise said frame relatively to said wheel by the reaction of the driving mechanism thereon.

2. In a self-propelled agricultural implement, the combination of a frame, a motor carried thereby, a road wheel driven by said motor and mounted for vertical adjustment in relation to the frame, transmission mechanism from the motor to said wheel so disposed as to exert a reactionary force on said wheel to raise the frame relatively thereto, and means to hold the frame in its raised or lowered positions of adjustment.

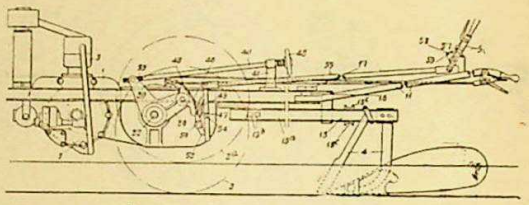
3. In a self-propelled agricultural implement, the combination of a frame, a motor carried thereby, a road wheel driven by said motor and mounted for vertical adjustment in relation to the frame, means whereby the force of the motor driving said wheel may at will be caused to automatically raise said frame relatively to said wheel by the reaction of the driving mechanism thereon, and adjustable means for determining the degree of relative movement between the frame and said road wheel.

4. In a self-propelled agricultural implement, the combination of a frame, a motor carried thereby, a road wheel driven by said motor and mounted for vertical adjustment in relation to the frame, transmission mechanism from the motor to said wheel so disposed as to exert a reactionary force on said wheel to raise the frame relatively thereto, means to hold the frame in its raised or lowered positions of adjustment, and adjustable means for determining the degree of relative movement between the frame and said road wheel.

5. A self-propelled agricultural implement comprising a frame, a motor carried thereby, a road wheel mounted for movement relatively to said frame in a vertical direction, transmission mechanism from said motor to said wheel including intermeshing gearing adapted to exert a lifting effort on the frame, an adjustable stop for limiting the degree of movement of the wheel in relation to the frame, and means to hold the frame in its raised or lowered position.

[Claims 6 to 8 not printed in the Gazette.]

1,204,226. SELF-PROPELLED AGRICULTURAL IMPLEMENT. ALBERT WYLES, Jr., Manchester, England. Original application filed Sept. 4, 1914, Serial No. 860,247. Divided and this application filed Jan. 22, 1916. Serial No. 73,553. (Cl. 97—30.)



1. In a self-propelled agricultural machine, the combination of a frame, a pair of side by side wheels supporting the frame, a motor mounted on the frame and connected to drive said wheels, an earth working implement carried by the frame, means for changing the plane of elevation of the frame, and means for varying the angle of the implement with respect to the frame, the whole constituting a unitary structure supported and balanced solely on the axis of the tractor wheels.

2. In a self-propelled agricultural machine the combination of a frame, a pair of side by side wheels supporting the frame, a motor mounted on the frame and connected to drive said wheels, an earth working implement carried by the frame and providing a rudder for the machine while traveling, means for changing the plane of elevation of the frame, and means for varying the terrain angle of the implement with respect to the frame, the whole constituting a unitary structure supported and balanced solely on the axis of the tractor wheels.

3. A self-contained motor driven agricultural implement comprising a frame, a pair of side by side wheels supporting said frame and adjustable relatively thereto, an earth working implement carried by said frame in rear of the wheels, and a motor carried by said frame in front of the wheels, the whole constituting a unitary structure supported and balanced solely on the axis of the tractor wheels.

4. A self-contained motor driven agricultural implement comprising a frame, a pair of side by side wheels supporting said frame and adjustable relatively thereto, an implement carrying member connected with the frame and capable of lateral adjustment relatively thereto, a tool carried by said member in rear of the wheels, and a motor carried by said frame in front of the wheels, the whole constituting a unitary structure supported and balanced solely on the axis of the tractor wheels.

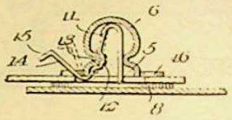
5. A self-contained motor driven agricultural implement comprising a frame, a pair of side by side wheels supporting said frame, means for vertically adjusting a wheel, a tool carried by said frame in rear of the wheels, and a motor carried by said frame in front of the wheels, the whole constituting a unitary structure supported and balanced solely on the axis of the tractor wheels, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,204,227. FASTENING DEVICE. MAY E. YOUNG, New Milford, Conn. Filed May 25, 1915. Serial No. 30,425. (Cl. 24—214.)

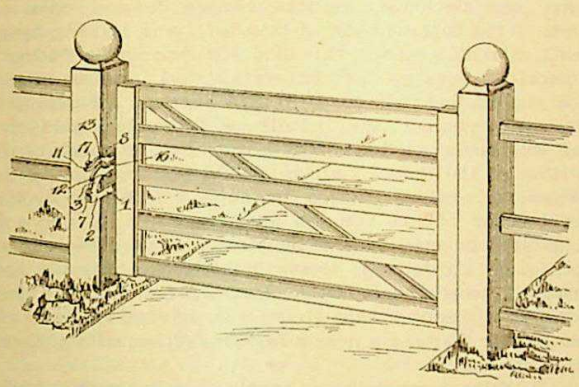
A fastening for securing the overlapping portions of an article together, comprising a socket member having a base adapted to be secured to one portion of the article, an internal circumferential rib formed on said member adjacent its base, a separable member including a base adapted to be secured to the other portion of the article,

a substantially inverted V-shaped shank carried by said base and including a relatively fixed branch and a resilient relatively movable branch, the latter being terminally spaced from its base, said movable branch having spaced depressions formed in its length, one for the reception of the lower edge of the socket member in which the latter is fulcrumed during the operative association of



the parts, and the other for the reception of said rib when the parts are associated and a manipulating portion forming a continuation of said movable branch, said manipulating portion projecting upwardly from beneath said socket and arranged exteriorly thereof and above the material to which said member is attached for the purpose set forth.

1,204,228. GATE-LATCH. LOUIS H. ZANDERS, Malvern, Iowa. Filed Mar. 26, 1915. Serial No. 17,208. (Cl. 70—28.)

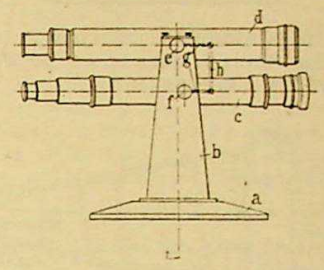


A gate latch comprising a semicircular frame having a straight lower member and a curved member connecting the ends of the straight member, said straight member being secured midway its ends to a post, the curved member having an opening in vertical alinement with said secured portion, and having an annular bearing formed about said opening, perforated lugs formed on opposite sides of the curved member adjacent its juncture with the straight member, a rocker arm pivotally mounted on said bearing, and having a double stop member adapted to engage the inner edge of the curved member, common means for securing the curved member to the post, and the rocker arm in position, said means passing through the last mentioned opening, a spring adapted to connect one end of the rocker arm to either of said lugs, the opposite end of the rocker arm being bifurcated and having a recess at the inner end of the bifurcation, said recess registering with the upper edge of the curved arm when the rocker arm is in normal position, and a striker carried by a gate and adapted when in locking position to rest on the upper edge of the curved member and in said recess.

1,204,229. TELESCOPE-TELEMETER. JAKOB ZWICKY, Langgass, St. Gall, Switzerland. Filed Oct. 30, 1911. Serial No. 657,530. (Cl. 33—46.)

1. The combination with a stand, and parallel standards thereon, of two horizontal pivots journaled in said standards one above the other and at an acute angle to each other, and a telescope mounted intermediate its ends on each of said pivots.

2. The combination with a stand, and parallel standards thereon, of two horizontal pivots journaled in said standards one above the other and at an acute angle to each other, a telescope mounted, intermediate its ends on each of said pivots, and means for connecting the telescopes to cause them to oscillate simultaneously.

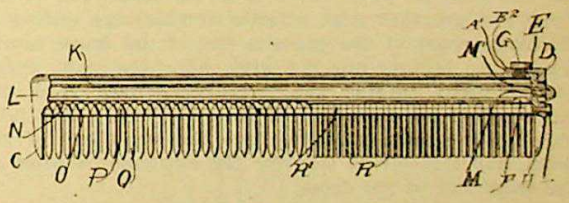


3. The combination with a stand, and parallel standards thereon, of two horizontal pivots journaled in said standards one above the other at an acute angle to each other, and a telescope mounted intermediate its ends on each of said pivots, a crank arm projecting from each pivot, and a link connecting the crank arm to cause the telescopes to oscillate simultaneously.

4. An instrument of the character described comprising a support, two telescopes mounted on the support to oscillate in vertical planes, and connections whereby they are caused to oscillate simultaneously, said connections consisting of a pin secured to oscillate with each telescope, and a link connecting said pins.

5. A measuring instrument comprising a base, standards supported by the base, independent pivot members held between the standards, a telescope supported on each pivot and adapted to move therewith, and means connecting the pivots whereby the telescopes are moved simultaneously.

1,204,230. COMB. NICHOLAS G. ABBATE, Baltimore, Md. Filed Apr. 6, 1914. Serial No. 829,846. (Cl. 132—3.)

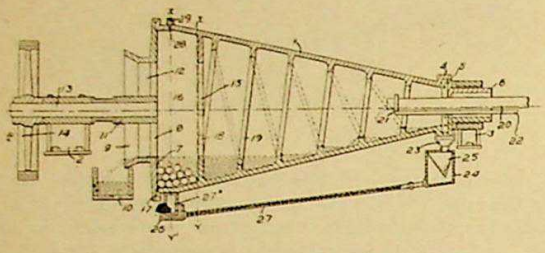


1. The comb herein described, consisting of a hollow back portion having an integral tooth at one end and a threaded filling opening at its other end, a series of teeth mounted in said back portion, a cap formed with a tooth and fitting upon said back portion and having a threaded opening in line with the filling opening of the back portion, a threaded plug for closing the said openings of the cap and back, and for securing the parts together, a reservoir mounted in the back having a filling opening, and a series of discharge openings and having means extending through said cap for turning the reservoir, said filling opening of the reservoir being adapted to register with the filling openings of the back and cap for supplying said reservoir.

2. The comb herein described, consisting of a hollow back portion having an integral tooth at one end and a threaded filling opening at its other end, a series of teeth mounted in said back portion, a cap formed with a tooth and fitting upon said back portion and having a threaded opening in line with the filling opening of the back portion, a threaded plug for closing the said openings of the cap and back and for securing the parts together, a reservoir mounted in the back having a filling opening, and a series of discharge openings and having means extending through said cap for turning the reservoir, and a screw mounted in the cap and bearing against

the teeth at one end for holding the teeth in proper position in the back portion, said filling opening of the reservoir being adapted to register with the filling openings of the back and cap for supplying said reservoir.

1,204,231. AMALGAMATOR. WILLON PERCIVAL ALDERSON, Timmins, Ontario, Canada. Filed Feb. 19, 1916. Serial No. 79,329. (Cl. 83—67.)



1. An amalgamator comprising a horizontally disposed conical drum rotatably mounted on suitable bearings and having a pulp inlet orifice at one end and a pulp discharge orifice at the opposite end, of means for feeding the mercury into the large end of the drum and carrying it gradually forward toward the small end, and means for discharging the amalgam from the small end of the drum.

2. An amalgamator comprising a horizontally disposed conical drum rotatably mounted on suitable bearings and having a pulp inlet at the small end and a pulp discharge at the large or opposite end, an internal spiral flange formed in the drum and extending longitudinally thereof, means for feeding mercury into the large end of the drum into engagement with the spiral flange, and means for continuously discharging the mercury and metal values as they are carried into the small end of the drum.

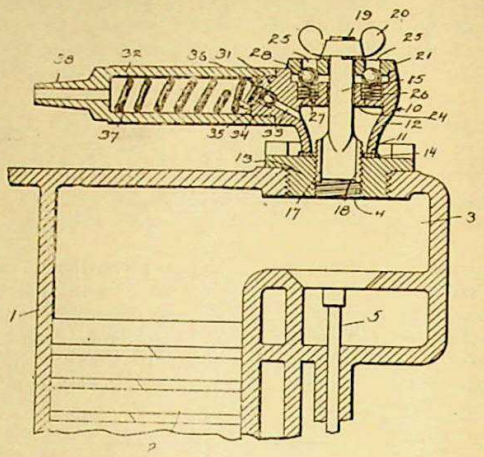
3. An amalgamator comprising a horizontally disposed conical drum rotatably mounted on suitable bearings, an annular internal groove formed at the small end of the drum and provided with a series of discharge orifices, a discharge spout at the opposite end of the drum, means for feeding mercury into the large end of the drum, means for gradually feeding the mercury forward from the large end of the drum toward the small end, a feed inlet pipe for the pulp extending into the small end of the drum, and a receiving trap for the amalgum collected at the small end of the drum.

4. An amalgamator comprising a horizontally disposed conical drum rotatably mounted on suitable bearings, an annular internal groove formed at the small end of the drum and provided with a series of discharge orifices, a discharge spout at the opposite end of the drum, means for feeding mercury into the large end of the drum, means for gradually feeding the mercury forward from the large end of the drum toward the small end, a feed inlet pipe for the pulp extending into the small end of the drum, a receiving trap for the amalgam collected at the small end of the drum, means in the trap for separating the metal values from the mercury, and means for automatically returning the mercury from the trap into the large end of the drum.

5. An amalgamator comprising a horizontally disposed conical drum rotatably mounted on suitable bearings, an annular internal groove formed at the small end of the drum and provided with a series of discharge orifices, a discharge spout at the opposite end of the drum, means for feeding mercury into the large end of the drum, means for gradually feeding the mercury forward from the large end of the drum toward the small end, a feed pipe for the pulp extending into the small end of the drum, a receiving trap for the amalgam collected at the small end of the drum, a strainer bag located in the trap and into which the amalgam is fed, and means for automatically returning the mercury from the trap into the large end of the drum.

[Claims 6 and 7 not printed in the Gazette.]

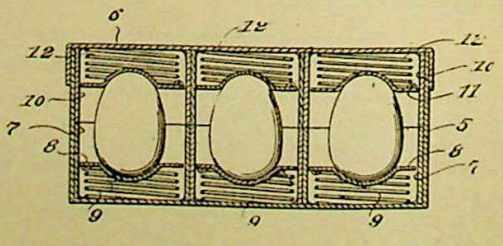
1,204,232. PNEUMATIC-TIRE-INFLATING DEVICE. ANDREW ANDERSON, West Brighton, N. Y. Filed Apr. 28, 1915. Serial No. 24,506. (Cl. 137—28.)



1. A valve comprising a housing, said housing having its upper end open, a cover for connection to said housing, a bolt extending through said cover and having its lower end flattened, arcuate flanges formed upon the edges of the flattened end of said bolt, said arcuate flanges being externally screw threaded for detachably fitting in a threaded opening for connecting said housing in position and binding said cover to said housing, a horizontally disposed web positioned within said housing, said cover and web being provided with a plurality of openings permitting of the inlet of air into said housing, spring controlled ball valves carried by said web for controlling the passage of air through said openings, a sleeve detachably connected to said housing, and an absorbent coil positioned within said sleeve for filtering the air upon passage therethrough, said sleeve communicating with said outlet opening, said sleeve also having its outer end reduced for forming a nozzle for connection with a flexible conduit.

2. A valve comprising a housing, said housing having its upper end open, a cover for connection to said housing, a bolt extending through said cover and having its lower end flat, arcuate flanges formed upon the edges of the flattened end of said bolt, said arcuate flanges being externally screw threaded for detachably fitting in a threaded opening and connecting said housing in position and binding the cover upon said housing, a horizontally disposed web positioned in said housing, said cover being provided with a plurality of openings for permitting of the inlet of air into said housing, and spring control ball valves carried by said web for controlling the passage of air through said openings, a sleeve detachably connected to said housing and an absorbent coil positioned within said sleeve for filtering the air upon passage therethrough, said sleeve communicating with said outlet openings and having its outer end reduced for forming a nozzle for connection with a flexible conduit.

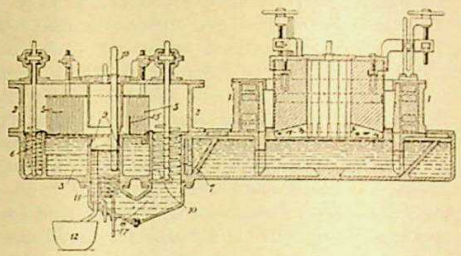
1,204,233. EGG-CARRIER. GEORGE R. ANDREWS, East Saginaw, Mich. Filed Mar. 17, 1916. Serial No. 84,966. (Cl. 217—28.)



An egg carrier comprising a receptacle having a plurality of cells therein, a cover having a similar number of cells projecting from one side thereof and adapted to

be positioned within the receptacle in alinement with the first mentioned cells to partially receive the eggs supported within the first mentioned cells, and yieldably supported disks arranged within the cells and each having a centrally depressed portion.

1,204,234. APPARATUS FOR THE ELECTROLYTIC MANUFACTURE OF LIGHT METALS AND REACTION PRODUCTS THEREOF. EDGAR ARTHUR ASHCROFT, London, England. Filed Mar. 12, 1912. Serial No. 683,377. (Cl. 204—21.)



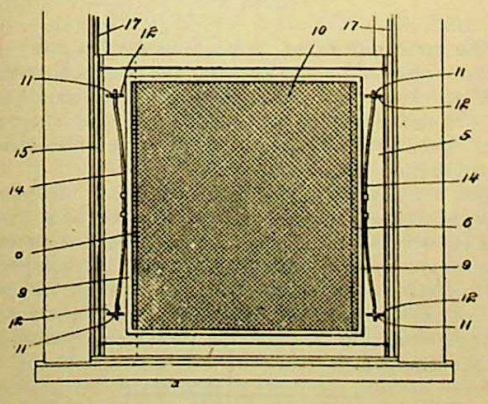
1. An electrolytic apparatus of the character described having only an extremely small cathode area exposed in the electrolyte and in close proximity to the anode, and means for circulating the electrolyte in a thin layer over the surface of the anode.

2. An electrolytic apparatus of the character described having only an extremely small cathode area exposed in the electrolyte and in close proximity to the anode, an overflow chamber for the electrolyte and a pump for returning the latter to the electrolytic cell.

3. An electrolytic apparatus of the character described having only an extremely small cathode area exposed in the electrolyte and in close proximity to the anode, a collecting chamber inside the cell for the electrolytic product and means for gathering the latter in said collecting chamber, together with means for cooling the liquids therein, for the purpose specified.

4. An electrolytic apparatus of the character described having only an extremely small cathode area exposed in the electrolyte and in close proximity to the anode, an overflow chamber for the electrolyte arranged to maintain the latter in a thin layer over the surface of the anode, and means for circulating the electrolyte from the overflow chamber to the electrolytic cell.

1,204,235. WINDOW-SCREEN. CHAUNCEY A. BATES and WALTER W. HOBBY, White Plains, N. Y. Filed Oct. 29, 1915. Serial No. 58,683. (Cl. 156—38.)

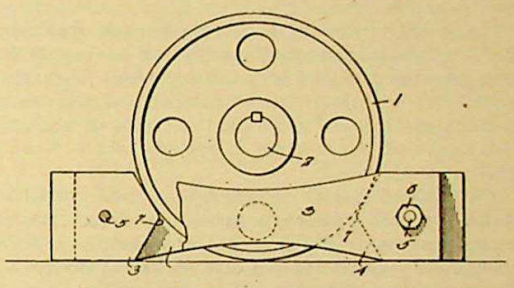


1. A window screen mounted for sliding adjustment and comprising a main frame and laterally adjustable side sections, means for normally extending said sections, means for limiting the outward movement thereof, and the inner edge section forming a flange adapted to be grasped for moving the sections toward each other.

2. A window screen mounted for sliding adjustment and comprising a main frame and laterally adjustable side sections, spaced upper and lower horizontal flanges on said main frame, said sections being formed with grooves for the reception of said flanges, means for normally extending said sections, and means for limiting the outward movement thereof.

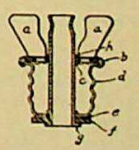
3. A window screen mounted for sliding adjustment, comprising a main frame and laterally adjustable side sections, lugs projecting from each of said sections through elongated slots in the main frame and slidably mounted therein, and a bowed spring secured to the opposite sides of the main frame engaging said lugs to normally maintain said sections in extended position.

1,204,236. TRACK-CLEANER. GEORGE B. BEGG, New Orleans, La. Filed May 2, 1916. Serial No. 94,972. (Cl. 104—100.)



A track cleaner and wheel guard for use in conjunction with a track wheel, having upper and lower sides identical in form and construction and also having an opening extending throughout its height to receive the wheel and further having in said opening means to engage the perimeter of the wheel; said means being arranged to occupy the same position relative to the wheel irrespective of which horizontal side of the cleaner and guard is opposed to the track or rail.

1,204,237. CAP FOR FOUNTAIN OR OTHER SYRINGES. EVERETT H. BICKLEY, Pittsburgh, Pa. Filed June 19, 1916. Serial No. 104,546. (Cl. 128—39.)



1. In a syringe cap, the combination of a threaded shell; a washer carrying thumb wings; a locking disk crimped on the shell embracing the winged washer; a tube having a flange on one end, and a means for hose connection on the other end, passing through the shell; and a packing washer surrounding the tube between the flanged portion and inner end of the shell, substantially as described.

2. In a syringe cap, the combination of a threaded hollow plug; a hose connection tube passing through said plug; and means for rotating the plug independent of the said tube.

3. In a syringe cap, the combination of a threaded apertured plug; a hose connection tube passing through said plug, the inner end of said tube being flanged; a washer intermediate of the inner end of said plug and flanged portion of the tube; and means for rotating the plug independent of the said tube.

4. In a syringe cap, the combination of a threaded hollow plug; a flanged hose connection tube passing through said plug; a packing washer intermediate of the plug and flanged end of said tube; a relatively hard washer backing up the first mentioned washer; and means for rotating the plug independent of the said tube, substantially as described.

1,204,238. TREATMENT OF PHOSPHATE-ROCK. EARL S. BISHOP, Pittsburgh, Pa., assignor to Armour Fertilizer Works, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1914, Serial No. 855,984. Renewed Feb. 1, 1916. Serial No. 75,624. (Cl. 71—7.)

1. The method of making phosphate rock available for plant food, which comprises subjecting to a sufficiently high temperature, in the presence of steam, a mixture of the rock with a suitable metal chlorid and an excess of silica sufficient to combine with the metal of the chlorid and with part of the calcium of the phosphate rock; substantially as described.

2. The method of making phosphate rock available for plant food, which comprises subjecting to a sufficiently high temperature, in the presence of steam, a mixture of the rock with a chlorid of a strong base and an excess of silica sufficient to combine with the metal of the chlorid and with part of the calcium of the phosphate rock; substantially as described.

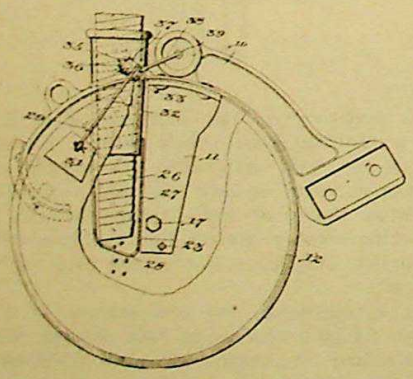
3. The method of making phosphate rock available for plant food, which comprises subjecting to a sufficiently high temperature, in the presence of steam, a mixture of the rock with an alkali metal chlorid and an excess of silica sufficient to combine with the metal of the chlorid and with part of the calcium of the phosphate rock; substantially as described.

4. The method of making phosphate rock available for plant food, which comprises subjecting to a sufficiently high temperature, in the presence of steam, a mixture of the rock with a metal chlorid and an excess of silica sufficient to combine with the metal of the chlorid and with part of the calcium of the phosphate rock, the temperature being maintained below that which would sinter the product; substantially as described.

5. The method of making phosphate rock available for plant food, which comprises subjecting to a sufficiently high temperature, in the presence of steam, a mixture of the rock with a metal chlorid and an excess of silica sufficient to combine with the metal of the chlorid and with part of the calcium of the phosphate rock, and recovering the hydrochloric acid given off during the operation in a fresh batch of the mixture; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,204,239. SEEDING-MACHINE. HARRISON B. BOZARD, La Crosse, Wis. Filed May 27, 1915. Serial No. 30,810. (Cl. 111—11.)



1. The combination of a boot frame, a pair of disks, stems reaching from the frame between the disks, a bearing connection between each disk and a stem, and an adjustable connection between the stems to adjust the disk edges with reference to each other and consisting of a bolt threaded at each end.

2. The combination of a boot frame, a pair of disks, stems reaching from the frame between the disks, a bearing connection between each disk and a stem, and an adjustable connection between the stems to adjust the disk edges with reference to each other, said adjustable connection consisting of a bolt with right and left thread that enter correspondingly threaded holes in their respective stems.

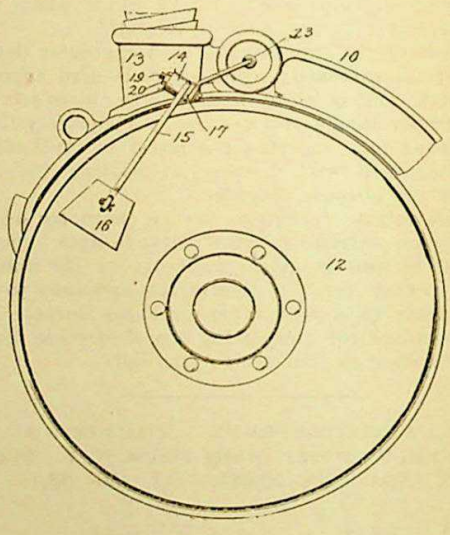
3. The combination of a pair of disks, a boot frame, a conductor tube, and a support for the lower end of the conductor tube consisting of a frame having vertically extending front and rear walls, and a bottom on which the lower end of the conductor tube is supported, said bottom having a hole for the passage of seed from the conductor tube.

4. The combination of a pair of disks, a boot frame, a conductor tube, and a support for the lower end of the conductor tube consisting of a frame having front and rear walls, and a bottom on which the lower end of the conductor tube is supported, said bottom having a hole for the passage of seed from the conductor tube, the rear wall of the frame being inclined upwardly and rearwardly and the bottom being inclined upwardly and rearwardly.

5. The combination of a pair of disks, a boot frame, a conductor tube, and a support for the lower end of the conductor tube consisting of a frame having front and rear walls, and a bottom on which the lower end of the conductor tube is supported, said bottom having a hole for the passage of seed from the conductor tube, the rear wall of the frame being inclined upwardly and rearwardly and the bottom being inclined upwardly and rearwardly, said rear wall having a hook connection with the boot frame.

[Claims 6 to 8 not printed in the Gazette.]

1,204,240. SCRAPER FOR SEEDING-MACHINES. HARRISON B. BOZARD, La Crosse, Wis. Original application filed May 27, 1915, Serial No. 30,810. Divided and this application filed Dec. 28, 1915. Serial No. 69,031. (Cl. 97—79.)



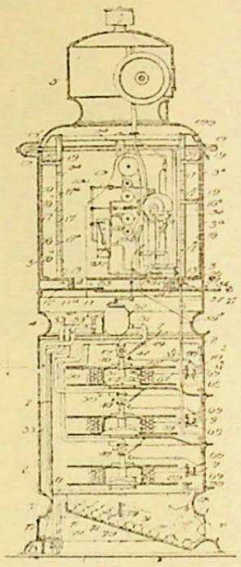
1. The combination of a boot frame, a disk mounted thereon, a scraper blade, an arm carrying said blade and formed of wire that is wound into a coil at a point between the ends of the arm, a sleeve passing through said coil on which it may rock and means connecting said sleeve with the boot frame.

2. The combination of a boot frame, a disk mounted thereon, a scraper blade, an arm carrying said blade and formed of wire wound into a coil at a point between its ends, a sleeve passing through said coil, a boss projecting from the side of the boot frame through which said sleeve passes and a fastening bolt passing through the sleeve and confining the coil on the sleeve while allowing it to rock thereon.

1,204,241. DISPENSING APPARATUS. RICHARD C. BRADLEY, Shreveport, La., assignor of one-fourth to Lee Kinnebrew and one-fourth to J. Mally Eastham, Shreveport, La., and one-fourth to C. Frank Ireland, Houston, Tex. Filed Jan. 19, 1914. Serial No. 813,036. (Cl. 221—95.)

1. In a liquid dispensing device, the combination of a supply pipe, a casing, a door therefor, a normally closed

control valve for said supply pipe, a spring for placing said control valve under tension, means for locking the door, and means disposed between the door and the control valve for holding the latter in its normally closed position against the tension of the control valve spring.



2. In a liquid dispensing device, the combination of a supply pipe, a casing, a door therefor, a normally closed control valve for said supply pipe, a spring for placing said control valve under tension, means for locking the door, means disposed between the door and the control valve for holding the latter in its normally closed position against the tension of the control valve spring, and means for unlocking the door, thereby permitting the opening of the control valve and the forcing open of the door by the control valve spring.

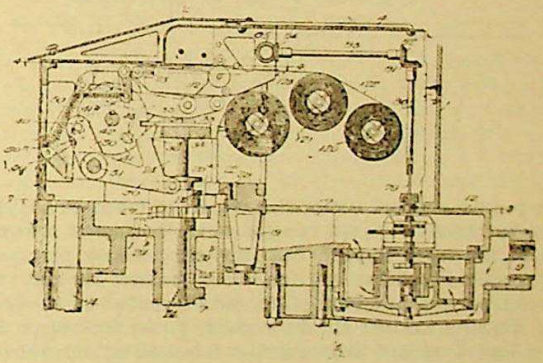
3. In a liquid dispensing device, the combination of a supply pipe, a casing, a door therefor, a normally closed control valve for said supply pipe, a spring for placing said control valve under tension, means for locking the door, means disposed between the door and the control valve for holding the latter in its normally closed position against the tension of the control valve spring, means for unlocking the door, thereby permitting the opening of the control valve and the forcing open of the door by the control valve spring, a casing having a compartment, a door therefor, means for locking the door, means for placing the door under tension, a key for unlocking the door, and means for preventing the withdrawal of the key until the door is closed.

4. In a liquid dispensing device, the combination of a supply pipe, a casing, a door therefor, a normally closed control valve for said supply pipe, a spring for placing said control valve under tension, means for locking the door, means disposed between the door and the control valve for holding the latter in its normally closed position against the tension of the control valve spring, means for unlocking the door, thereby permitting the opening of the control valve and the forcing open of the door by the control valve spring, a casing having a compartment, a door therefor, means for locking the door, means for placing the door under tension, a key for unlocking the door, means for preventing the withdrawal of the key until the door is closed, a casing, a hinged door therefor, a lock for said door comprising a slidable member carried by the door and arranged to normally engage the interior of the casing, a push rod for moving said slidable member to free the door from the casing, means for retaining said push rod in its shifted position, and means carried by the casing and arranged to be engaged by the door when the latter is closed for releasing said push rod and permitting its return to normal position.

5. In a liquid dispensing device, the combination of a supply pipe, a casing, a door therefor, a normally closed control valve for said supply pipe, a spring placing said control valve under tension, means for locking the door, means disposed between the door and the control valve for holding the latter in its normally closed position against the tension of the control valve spring, means for unlocking the door, thereby permitting the opening of the control valve and the forcing open of the door by the control valve spring, a casing having a compartment, a door therefor, means for locking the door, means for placing the door under tension, a key for unlocking the door, means for preventing the withdrawal of the key until the door is closed, a casing, a hinged door therefor, a lock for said door comprising a slidable member carried by the door and arranged to normally engage the interior of the casing, a push rod for moving said slidable member to free the door from the casing, means for retaining said push rod in its shifted position, means carried by the casing and arranged to be engaged by the door when the latter is closed for releasing said push rod and permitting its return to normal position, said last named means comprising a spring-pressed pin extending through the casing, one end of said pin being arranged to be engaged by the door, and the other end of said pin being in operative relation with said push rod.

[Claims 6 to 12 not printed in the Gazette.]

1,204,242. LIQUID-DISPENSING APPARATUS. RICHARD C. BRADLEY, Shreveport, La., assignor of one-fourth to Lee Kinnebrew and one-fourth to J. Maley Eastham, Shreveport, La., and one-fourth to C. Frank Ireland, Houston, Tex. Filed Oct. 20, 1915. Serial No. 56,958. (Cl. 221—95.)



1. In a liquid dispensing device, a casing, a plurality of liquid meters carried thereby, a supply pipe for each meter, a common discharge pipe, a conduit connecting each of said meters with said common discharge pipe, a valve or cock for controlling each of said conduits, an individual gear connected with each of said valves, and means for selectively engaging any one of said gears and for rotating the gear thereby operating the valve associated with the gear.

2. In a liquid dispensing device, a casing, a plurality of meters carried by the casing, a supply pipe for each meter, a common discharge pipe, an individual conduit connecting each of said meters with said common discharge pipe, an individual valve in each of said conduits, a segmental gear associated with each valve, a rotatable sleeve provided with a plurality of sets of teeth, each set being arranged to engage one of the gears associated with said valves for operating the latter, and means for shifting the said sleeve to effect a selective operation of said gears.

3. In a liquid dispensing device, a casing, a plurality of meters carried thereby, a supply pipe for each meter, a common discharge pipe, an individual conduit for connecting each meter with said common discharge pipe, a rotary valve disposed in each of said conduits, a segmental gear associated with each of said rotary valves, a slidable sleeve, a plurality of sets of segmental gears carried by said sleeve, said segmental gears being disposed in parallel planes, and one set of said segmental gears being arranged to engage with a set of gears connected with said valves.

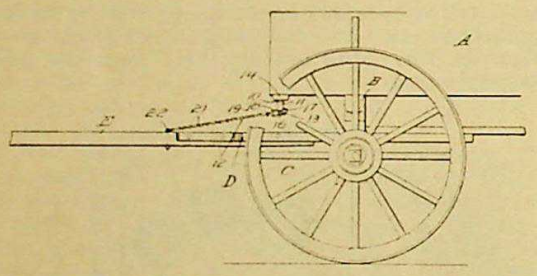
4. In a liquid dispensing device, a casing, a plurality of meters carried by said casing, a supply pipe for each

meter, a common discharge pipe, an individual conduit connecting each meter with said common discharge pipe, a rotary valve disposed in each conduit, a segmental gear connected with each of said rotary valves, each of said segmental gears being in the same common plane, a slidable sleeve, a plurality of segmental gears carried by said slidable sleeve, said sleeve gears being in different parallel planes, and means for moving said sleeve to bring one of said sleeve gears into mesh with one of said valve gears.

5. In a liquid dispensing device, a casing, a plurality of meters carried by said casing, a supply pipe for each meter, a common discharge pipe, an individual conduit for connecting each meter with said common discharge pipe, a rotary valve in each of said conduits, an individual gear for operating each of said valves, said gears being in a common plane, a sleeve having a movement at right angles to said common plane and being provided with a circumferential groove, said sleeve having a plurality of gears, each of said gears being arranged to mesh with one of said individual valve gears, and means for moving said sleeve to selectively operate any of said valve gears.

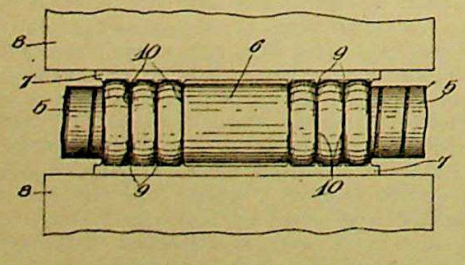
[Claims 6 to 22 not printed in the Gazette.]

1,204,243. TONGUE-SUPPORT FOR VEHICLES. EDWARD BREITENSTEIN, Newton, Kans. Filed Nov. 29, 1915. Serial No. 64,089. (Cl. 21—63.)



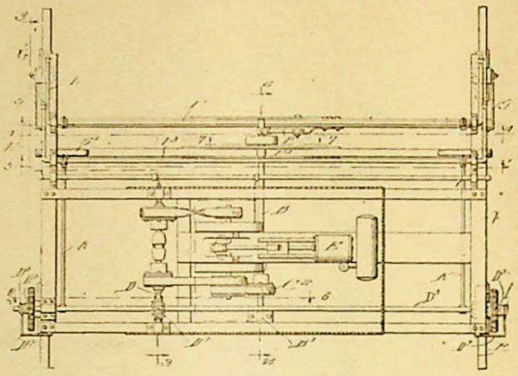
A tongue support comprising a pair of brackets adapted to be fastened in spaced relation to the bottom of a wagon box at the front thereof, each including a base plate and a depending tubular portion, bolts passed through the tubular portion and base plate, nuts threaded on the bolts and working against the base plate, hooks formed on the bolts and arranged adjacent the free end of the tubular portion, a track rod engaged in the hooks and having curved terminals coöperating with said hooks to prevent displacement of the rod therein, a pulley sheave having a pulley movable over the track rod, a hook swiveled in the sheave, a chain adapted to have one end connected with a tongue, and a coiled retractile spring having one end connected to the chain and its opposite end connected to the last named hook.

1,204,244. REPAIR FOR TUBING. WILLIAM X. BRUNS, Chicago, Ill. Filed Feb. 17, 1916. Serial No. 78,889. (Cl. 64—12.)



A repair for spirally formed tubing comprising a sleeve of stiff material mounted on the tubing, the sleeve having a series of peripheral indentations forming ribs on its inner wall, the plane of each indentation being perpendicular to the axis of the tubing, and the ribs seating in the spaces between the spiral coils of the tubing at the intersection of said ribs with said spaces.

1,204,245. CONCRETE-TAMPER. EDWARD GEORGE CARR, Oceanside, Cal. Filed June 22, 1915. Serial No. 35,576. (Cl. 94—4.)



1. The herein described method of tamping concrete beds consisting in suspending a pair of spaced apart independent templets or blades slightly above said bed, and imparting the horizontal vibrations of an unbalanced revolving shaft to one of said templets and the vertical vibrations of the said shaft to the other of said templets.

2. The herein described method of tamping concrete roads or beds consisting in suspending a pair of independent tamping blades slightly above the bed and simultaneously imparting a horizontal vibratory motion to one blade and a vertical vibratory motion to the other blade.

3. The herein described method of tamping concrete beds consisting in suspending across said bed a pair of independent tamping blades, mounted to travel forwardly and backwardly along the bed, and imparting a horizontal vibratory motion only, to one of said blades and a vertical vibratory motion only, to the other of said blades, said vibratory motions being imparted only during the forward travel of said blades.

4. The herein described method of tamping concrete beds consisting in yieldingly suspending a pair of spaced apart tamping blades slightly above said concrete bed and simultaneously translating the horizontal vibrations of a rapidly revolving weighted shaft to one of said blades and the vertical vibrations of said shaft to the other blade.

5. The herein described method of tamping concrete beds consisting in translating the vibrations of an unbalanced revolving shaft to a pair of spaced apart tamping templets suspended in parallel planes, the vibrations imparted to one templet being directed in a horizontal direction and the vibrations imparted to the other templet being directed in a vertical direction, the vibrations being imparted only during a forward travel of said templets along the concrete bed.

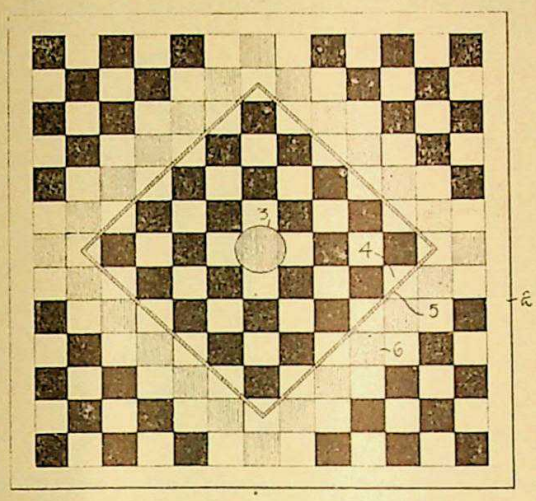
[Claims 6 to 14 not printed in the Gazette.]

1,204,246. GAME-BOARD. WALTER C. CARTER, Pittsburgh, Pa. Filed Apr. 15, 1916. Serial No. 91,400. (Cl. 46—64.)

1. A game board having a square field laid off in alternate different colored checks and having a centrally disposed king's check of one color surrounded by a king's space having checks of a different color from the central check, said king's space being square and defined by a line of contrasting color to the checks, the sides of the king's space extending diagonally with relation to the sides of the field.

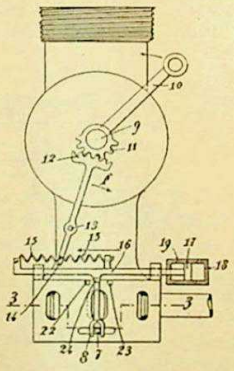
2. A game board having a square field laid off in alternate different colored checks and having a centrally disposed king's check of one color surrounded by a king's space having checks of a different color from the central check, said king's space being square and defined by a line of contrasting color to the checks inclosed therein, the sides of the king's space extending diagonally to the sides

of the field, the alternate sections exterior to the line and touching the line at the corners being of the same color



as the line and as the king's check but differing in color from the other checks.

1,204,247. CARBURETER. CHARLES HENRI CLAUDEL, Levallois-Perret, France. Filed Nov. 10, 1913. Serial No. 800,191. (Cl. 261—44.)



1. In a carbureter, the combination of a casing, a tubular mixture valve, a hydrocarbon nozzle arranged to discharge into the chamber within said valve, an air valve controlling the admission of air to the chamber within the mixture valve, means connecting the valves whereby movement of the mixture valve will be communicated to the air valve, and means for retarding movement of the air valve without impeding movement of the mixture valve, for the purpose described.

2. In a carbureter, the combination of a casing having a plurality of air inlets in its side wall, a conduit for heated air communicating with one of said air inlets, a fuel jet extending into the casing, a main valve for controlling the output of combustible mixture, rotatable about an axis extending transversely of the casing, a valve within the casing and rotatable about an axis extending longitudinally thereof to control the admission of air, and connections for effecting simultaneous actuation of said valves and permitting the air inlet valve to move in one direction at a lower speed than the main valve.

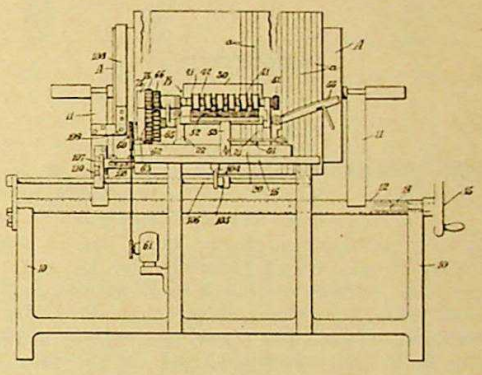
3. In a carbureter, the combination of a casing having suitable air and fuel inlets and a mixture outlet, a valve controlling the passage of combustible mixture from the casing, means providing a by-pass for combustible mixture about the mixture valve, and a nozzle extending into the casing from the outlet of said by-pass and provided with a plurality of discharge openings.

4. In a carbureter, the combination of a casing, provided with suitable air and fuel inlets, a valve controlling the passage of combustible mixture to the outlet passage of the casing, the casing having formed therein a conduit constituting a by-pass for combustible mixture about the valve, and a nozzle extending from said by-pass into the outlet passage of the casing to deliver the mixture at points relatively distant from the walls of said passage.

5. In a carbureter, the combination of a casing having suitable air inlet and mixture outlet openings, a rotary tubular valve controlling the passage of combustible mixture to the mixture outlet, a fuel nozzle extending into the carbureting chamber or passage in said valve, and a mixture nozzle extending into the casing beyond said valve and communicating with the carbureting chamber or passage in said valve when the latter is in its closed position.

[Claims 6 to 12 not printed in the Gazette.]

1,204,248. METHOD OF AND APPARATUS FOR PRODUCING ROLLS OF ADHESIVE MATERIAL. WILLIAM F. CODRINGTON, New York, N. Y. Filed Apr. 24, 1914. Serial No. 834,050. (Cl. 242—55.)



1. The method of producing rolls of adhesive tape, which consists in producing a relatively wide web of the adhesive material wound on a supply drum, cutting the web wound on the supply drum circumferentially into a plurality of tapes of equal width, unwinding a plurality of alternate tapes from the supply drum simultaneously and winding the same on a winding spindle, and thereafter unwinding other alternate tapes from the supply drum and winding the same on the winding spindle.

2. The method of producing rolls of adhesive tape, which consists in drawing the tape from a supply roll and applying it as it is withdrawn from the supply roll to a rotating cylinder to the surface of which the adhesive side of the tape adheres, and leading the tape from said cylinder to a winding spindle by the rotation of which the tape is stripped from the cylinder and wound on the spindle, whereby the tape is wound on the spindle under a tension which is independent of the tension under which the tape is drawn from the supply roll.

3. The method of producing rolls of adhesive tape, which consists in drawing the tape from a supply roll by means of a feeding cylinder to the surface of which the adhesive side of the tape adheres, and leading the tape from the feeding cylinder to a winding spindle by the rotation of which the tape is stripped from the cylinder and wound on the spindle, whereby the tape is wound on the spindle under a tension which is independent of the tension under which the tape is drawn from the supply roll.

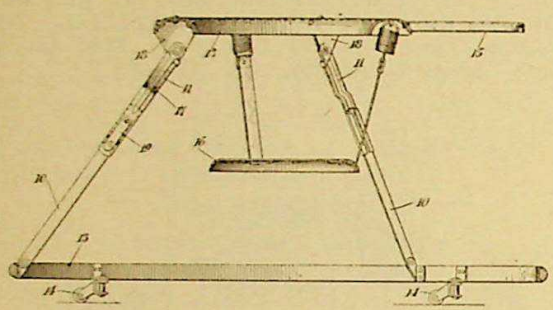
4. The method of producing rolls of adhesive tape, which consists in simultaneously drawing a plurality of tapes from a supply roll and applying them as they are withdrawn from the supply roll to a rotating cylinder to the surface of which the adhesive side of the tapes adheres, and leading the tapes from said cylinder to a winding spindle by the rotation of which the tapes are stripped from the cylinder and wound on the spindle, whereby each tape is wound on the spindle under a tension which is independent of the tension under which the tapes are drawn from the supply roll and independent of the tension under which the other tape or tapes are wound on the spindle.

5. The method of producing rolls of adhesive tape, which consists in simultaneously drawing a plurality of tapes from a supply roll by means of a feed cylinder to

which the adhesive side of the tape adheres, and leading the tapes from said cylinder to a winding spindle by the rotation of which the tapes are stripped from the cylinder and wound on the spindle, whereby each tape is wound on the spindle under a tension which is independent of the tension under which the tapes are drawn from the supply roll and independent of the tension under which the other tape or tapes are wound on the spindle.

[Claims 6 to 34 not printed in the Gazette.]

1,204,249. COLLAPSIBLE BABY-WALKER. EDWARD T. CONDON, Jr., Morristown, N. J. Filed Jan. 31, 1914. Serial No. 815,579. (Cl. 155—45.)



1. A baby walker, comprising: a rim, and an arm rest; a plurality of struts each pivotally attached only to the rim and arm rest and divided between their points of attachment into two parts slidable relative to each other to collapse the walker and lower the arm rest to the rim; stops to limit the inward motion of the struts; and means to lock the slidable parts of a strut to each other.

2. A baby walker, comprising: a rim, and an arm rest; plates fixed to the arm rest and having an edge turned over to provide a stop; a plurality of struts each pivotally attached only to the rim and to the said respective plates fixed to the arm rest and the stops of which plates are adapted to limit the inward movement of said struts, the struts themselves being divided between their points of attachment into two parts slidable relatively to each other to collapse the walker and lower the arm rest to the rim; and means to lock the slidable parts of a strut to each other.

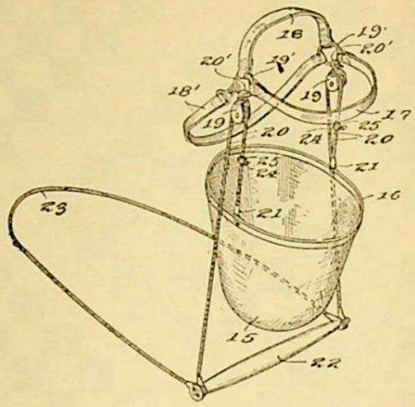
3. A baby walker, comprising: a rim, and an arm rest; plates fixed to the arm rest; a plurality of struts each pivotally attached only to the rim and to the said respective plates fixed to the arm rest, the struts being divided between their points of attachment into two parts slidable relatively to each other to collapse the walker and lower the arm rest to the rim; and a flat spring member for each strut and secured to one of the parts thereof and carrying a pin adapted to pass through a suitable opening therein and into an opening of the other part which is adapted to register therewith to lock the two parts of a strut member together.

4. A baby walker, comprising: a rim, and an arm rest; a plurality of struts each pivotally attached only to the rim and arm rest and divided between their points of attachment into two parts slidable relative to each other to collapse the walker and lower the arm rest to the rim; and means to lock the slidable parts of a strut to each other.

1,204,250. NOSE-BAG FOR HORSES. WILLIAM H. COOPER, East St. Louis, Ill. Filed Nov. 19, 1915. Serial No. 62,364. (Cl. 119—66.)

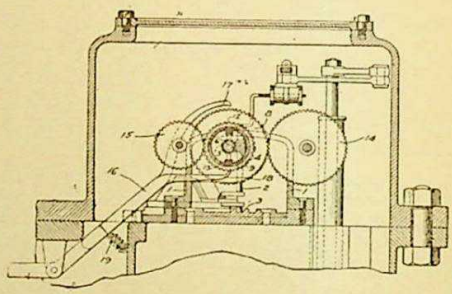
1. The combination with a head stall having guide members at opposite sides thereof, of a nose bag having a spreading hoop at its upper edge, supporting elements guided over the guide members and equipped with snaps connected with the hoop at diametrically opposite sides thereof, and an elongated weight with which the other ends of the supporting elements are connected.

2. The combination with a head stall having guide members at opposite sides thereof, of a nose bag having a spreading hoop at its upper edge, supporting elements guided over the guide members and equipped with snaps connected with the hoop at diametrically opposite sides



thereof, and an elongated weight with which the other ends of the supporting elements are connected; and a neck encircling strap having its ends connected with the ends of the elongated weight.

1,204,251. GEARING. HORACE CHRISMAN, Edgewood, Pa., assignor to Pittsburgh Meter Company, a Corporation of Pennsylvania. Original application filed Dec. 7, 1910, Serial No. 596,018. Divided and this application filed Feb. 4, 1913. Serial No. 746,109. (Cl. 74—34.)



1. A differential mechanism, comprising a shaft, two actuating gears loosely mounted on said shaft, an arm carried by the shaft, a pinion meshing with each of said gears and journaled on said arm, and actuated means for engaging one gear and holding it against rotation and for simultaneously releasing the other.

2. A differential mechanism, comprising a driven shaft, actuating wheels loosely mounted on the shaft, a differential pinion carried by the shaft and engaging both of said wheels, and a lever provided with two pawls each for engaging one of said wheels for holding it against rotation, said pawls being so arranged on said lever that one wheel is released simultaneously with the engagement of the other.

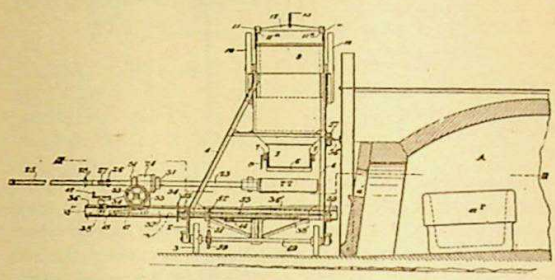
3. A differential registering mechanism, comprising a shaft, a sleeve on said shaft, pinions carried by the sleeve at approximately right angles to the shaft, gear wheels loose on the shaft and meshing with the pinions, and a lever carrying pawl teeth for alternately engaging said gear wheels.

4. In combination with a driven shaft, two gears loosely mounted on the shaft, each forming a part of a separate driving mechanism, a sleeve rigidly mounted on said shaft and having radially extending arms formed thereon, a differential gear journaled on each of said arms and meshing with teeth formed on each of said loosely mounted gears, and holding means movable to hold one of said loosely mounted gears stationary and for simultaneously releasing the other.

5. A differential mechanism, comprising a driven shaft, two gears loosely mounted on said shaft, a differential

pinion carried by said shaft and meshing with both said gears, and means for alternately engaging the gears and for thereby holding one against rotation and releasing the other.

1,204,252. POT-FILLING APPARATUS. JAMES W. CRUIKSHANK, Pittsburgh, Pa. Filed May 25, 1914. Serial No. 840,671. (Cl. 214—23.)



1. Pot filling mechanism consisting of a movable truck adapted to be moved along in front of a furnace and provided with a transverse trackway having a level and an inclined portion, a carriage mounted on said trackway provided with a vertically arranged swivel bearing, a horizontal bearing having a vertical stud swiveled in said bearing and adapted to be deflected therein, and a rotatably and longitudinally movable spindle mounted in said horizontal bearing provided with a charging ladle.

2. Pot filling mechanism consisting of a movable truck adapted to be moved along in front of a furnace and provided with a transverse trackway having its inner portion inclined upwardly toward the furnace, a carriage mounted on said trackway provided with a swivelly mounted bearing, and a spindle rotatably and longitudinally mounted in said bearing provided with a charging ladle at one end and a laterally swinging pivoted handle at its other end.

3. Pot filling mechanism consisting of a movable truck adapted to be moved along in front of a furnace and provided with a transverse trackway, a carriage mounted on said trackway provided with a swivelly mounted bearing, a rotatably and longitudinally movable spindle mounted in said bearing provided at its inner end with a charging ladle, and means for automatically deflecting the swivelly mounted bearing during travel of said carriage consisting of an arm secured to the spindle having a projecting stud and a controlling trackway for said stud.

4. In combination, a traveling truck having a transverse trackway, a supporting carriage thereon having a swivelly mounted bearing, means for automatically deflecting said bearing laterally on its swivel, and a spindle rotatably mounted in said bearing provided at one end with a ladle and at the other end with a handle.

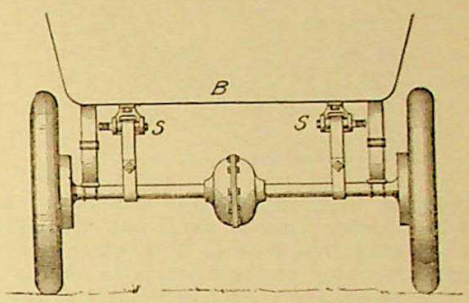
5. In combination, a traveling truck having a transverse trackway, a supporting carriage thereon having a swivelly mounted bearing, means for deflecting said bearing laterally on its swivel, and a spindle rotatably mounted in said bearing provided at one end with a ladle and at the other end with a laterally adjustable pivoted handle.

[Claims 6 to 10 not printed in the Gazette.]

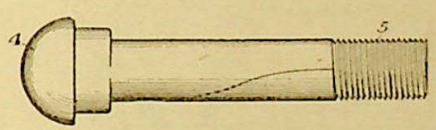
1,204,253. RECOIL SHOCK-ABSORBER. HENRY F. DIERCKS, Algonquin, Ill. Filed Jan. 15, 1916. Serial No. 72,312. (Cl. 267—24.)

1. In a shock absorbing device of the character described, the combination with a tubular casing open at one end and having a closed air cushion chamber at the other end, of a spring pressed plunger device arranged within the casing, said plunger device comprising a hollow head having a valve seat at one end and a loop element at the other, a valve cage member detachably fitted to said plunger head and surrounding the valve seat thereof, a washer member clamped between said valve cage and plunger head, and a valve yieldably held between the valve cage and said valve seat.

2. In a shock absorbing device of the character described, the combination with a tubular casing open at one end and having a closed air cushion chamber at the other end, of a spring pressed plunger device arranged within the casing and including a flexible axle connector passing out of said open end, and a hollow plunger head having an annular abutment flange and a threaded nipple portion providing a valve seat, a valve cage member having an interiorly threaded clamping ring portion for engaging with said threaded nipple, a flexible washer cup having a portion thereof clamped between said annular abutment flange and the ring of the valve cage, and a valve member yieldably held on said valve seat and having a guiding engagement in the valve cage.



1,204,254. RESILIENT BOLT. ETHAN I. DODDS, Central Valley, N. Y., assignor to Kerner Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1913, Serial No. 759,916. Renewed Apr. 10, 1916. Serial No. 90,282. (Cl. 85—1.)



1. A bolt having an integral plain head at one end, the body of the bolt having at the other end a threaded portion of a diameter not larger than that of the body, the said body having between the threaded portion and the head connecting members with substantially flat faces contacting with each other and twisted through an angle of less than 180 degrees, substantially as described.

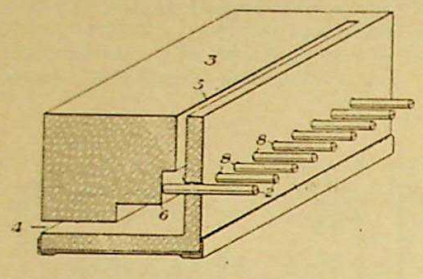
2. A track bolt having an integral plain head with a shouldered portion at one end, the body of the bolt having at the other end a threaded portion of a diameter not larger than that of the body, the said body having between the threaded portion and the head connecting members with substantially flat faces contacting with each other and twisted through an angle of less than 180 degrees, substantially as described.

3. A bolt having an integral plain head at one end, the body of the bolt having at the other end a threaded portion of a diameter not larger than that of the body, the said body having between the threaded portion and the head connecting members, said members being divided transversely through the entire thickness of the body and having substantially flat faces contacting with each other and twisted through an angle of less than 180°; substantially as described.

1,204,255. METHOD OF MANUFACTURING BOLTS. ETHAN I. DODDS, Central Valley, N. Y., assignor to Kerner Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 17, 1913. Serial No. 768,308. (Cl. 10—27.)

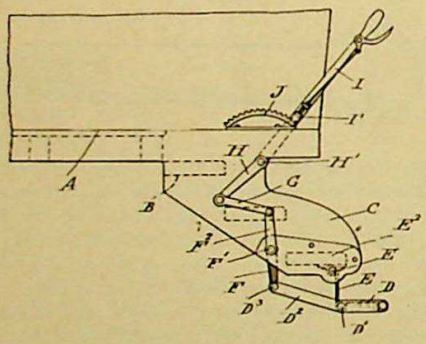
1. The herein described method of manufacturing bolts and the like having integral heads and separate body portions extending from head to head, which consists in assembling a plurality of bar members to form a blank, heating a predetermined portion of the end of the blank and protecting the remainder of the blank from being heated, simultaneously upsetting and welding the heated

end portion to form a head, and then twisting the two separate members upon each other, substantially as described.



2. The herein described method of manufacturing bolts and the like having integral heads and separate body portions extending from head to head, which consists in assembling a plurality of bar members to form a blank, heating a predetermined portion of the end of the blank and protecting the remainder of the blank from being heated, simultaneously upsetting and welding the end portion to form a head, then heating a predetermined portion of the other end of the blank and protecting the body portion from being heated, and then simultaneously upsetting and welding said end portion to form the second head and twisting the body members about each other, substantially as described.

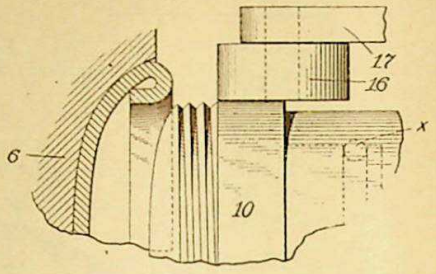
1,204,256. FOLDING CAR-STEP. JOSEPH R. DUGGER, JOSEPH L. DUGGER, and EDWARD E. DUGGER, Norman, Okla. Filed May 10, 1916. Serial No. 96,720. (Cl. 105—86.)



Folding steps comprising, in combination with the fixed steps of a car having side walls, a crank shaft journaled in said walls and having two integral parallel arms projecting therefrom and terminating in apertured ends, a pin mounted in the apertured ends of said arms, angle levers having pivotal connection with the pin outside of said arms, a folding step, a rod carried thereby and to which said levers are pivoted at the angled portions of the levers, a rod carried by one of the fixed steps, a plate having portions of the edge thereof turned to form rolls and which are journaled upon the rod upon the fixed step, said plate having a roll upon its opposite end extending its full width and pivotally mounted upon the rod carried by the folding step, and lever and link connections with said crank shaft for rocking the same.

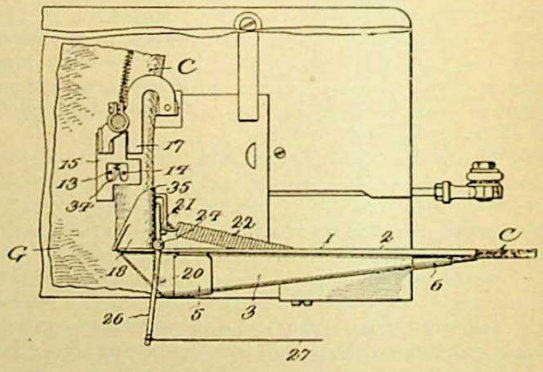
1,204,257. METHOD OF MAKING WATCH BACKS AND BEZELS. GEORGE F. EBERHARD, Trenton, N. J., assignor to Robt. H. Ingersoll & Bro., a Joint-Stock Association organized under the laws of New York. Filed Dec. 30, 1913. Serial No. 809,556. (Cl. 29—179.)

1. The herein described process consisting in turning inwardly the edge portion of a cup-shaped member, holding said member in a cup-shaped die, operating a punch having a screw thread on its lateral face within the cup-shaped member and die and by pressure exerted progressively along the said turned edge and in a direction parallel with the axis of the punch and die and across the holding surface of the die progressively upsetting the metal of the turned edge in a direction transverse to the punching action and into said screw threads on the lateral face of the punch substantially as described.



2. The herein described process of screw threading a member having a rim consisting in holding the member between a female die and a punch having screw threads, and then exerting pressure progressively along the rim of the member so held and in a direction parallel with the axis of the punch and die and thereby upsetting the metal of the rim in a direction transverse to the punch axis and into said screw threads on the lateral face of the punch, substantially as described.

1,204,258. SEWING-MACHINE AND FOLDING ATTACHMENT THEREFOR. GEORGE W. EBERLEY, Whitesboro, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 20, 1912. Serial No. 732,508. (Cl. 112—1.)



1. The combination with a folding device for guiding and inverting a strip, of a guiding device for directing the inverted strip to the stitch forming mechanism and means whereby the angle of said guiding device relative to the longitudinal axis of the folder may be adjusted for varying the position of the strip fed to the stitch forming mechanism.

2. The combination with a folding device for guiding and inverting a strip, of a guiding device for directing the inverted strip to the stitch forming mechanism, and manually controlled means for adjusting the angle of said guiding device relative to the longitudinal axis of the folder for varying the position of the strip fed to the stitch forming mechanism.

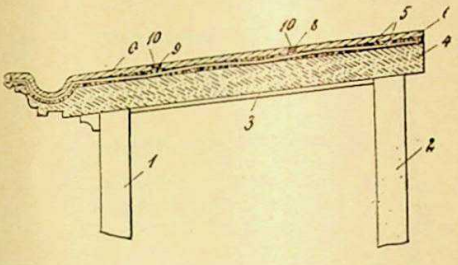
3. The combination with a main folding device for folding and inverting a strip, of a guiding device for directing the inverted strip to the stitch-forming mechanism, said guiding device being pivoted to said main folding device, and means for adjusting the angle of said guiding device relative to the longitudinal axis of the folder.

4. The combination with a folding device for folding and inverting a strip, of a guiding device for directing the inverted strip to the stitch-forming mechanism, said guiding device being normally positioned with its longitudinal axis at right angles to the longitudinal axis of the folder, and means for adjusting said guiding device about its receiving end as an axis, whereby the angle of said guiding device may be adjusted relative to the longitudinal axis of the folder.

5. The combination with a folding device for folding and inverting a strip, of a guiding device for directing the inverted strip to the stitch-forming mechanism, said guiding device having the receiving end thereof cut at an angle of forty-five degrees to the longitudinal axis of the guiding device, said edges of the receiving end being positioned so that the strip is inverted over the same, and means for varying the angle of said guiding device relative to the longitudinal axis of said folder.

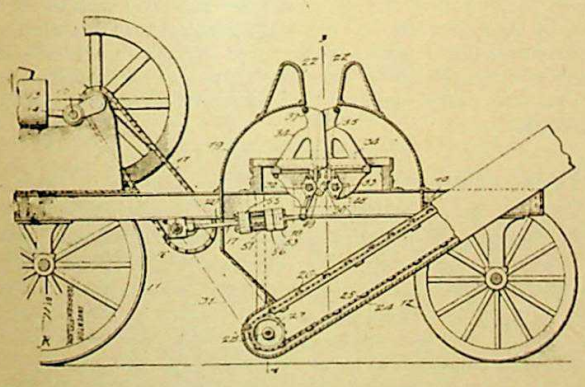
[Claims 6 to 27 not printed in the Gazette.]

1,204,259. PROCESS AND MEANS FOR THE MANUFACTURE OF WATERPROOF AND EXPANSIVE ROOFING AND FLOORING. IGNAZ EGGER and CARL GARTENMANN, Gossau, Switzerland. Filed Oct. 31, 1912. Serial No. 728,830. (Cl. 108—28.)



In a roof construction, a base having a concaved extension, a layer of reinforced plastic material having a concaved extension conforming to the base, said layer having a shoulder adjacent one end thereof, blocks of insulating material positioned over the reinforced plastic material, the blocks of insulating material adjacent one end of the roof engaging the shoulder and having a concaved extension positioned in the concaved extension of the reinforced plastic material and forming a gutter, expansible material positioned between the blocks of insulating material to allow contraction and expansion thereof.

1,204,260. HEMP-BREAKING MACHINE. WARREN PRICE ELKIN, Winchester, Ky. Filed June 21, 1916. Serial No. 104,981. (Cl. 13—6.)



1. In a hemp breaking machine, opposing series of spaced alternating knives, movable toward and away from one another, each knife having a bearing adjacent its upper end, and a connecting member extending through said bearings of each series of knives and rigidly connecting the knives thereof.

2. In a hemp breaking machine, a pair of spaced parallel oscillatory shafts, knife brackets secured in rigid series on each shaft and having apertured lugs extending toward one another in parallel planes, links connecting said lugs, knives detachably secured upon said brackets, and means for oscillating one of said shafts.

3. In a hemp breaking machine, a pair of spaced parallel oscillatory shafts, knife brackets secured in rigid series on each shaft and having apertured lugs at their upper forward and rear portions, knives having lugs at their lower forward and rear portions bolted to the lugs of the brackets, and means for oscillating the said shafts.

4. In a hemp breaking machine, a pair of spaced parallel oscillatory shafts, knife brackets secured thereon in rigid series, knives detachably connected at their lower ends to the brackets and arranged in spaced relation along each shaft, the knives of the two shafts alternating with one another, and means for connecting the upper portions of the knives of each series in rigid spaced relation.

5. In a hemp breaking machine, a pair of spaced parallel oscillatory shafts, knife brackets secured thereon in rigid series, knives detachably connected at their lower ends to the brackets and arranged in spaced relation along each shaft, the knives of the two shafts alternating with one another, and means for connecting the upper portions of the knives of each series in rigid spaced relation, said means consisting of bolts extending through the upper portions of the knives of each series, and thimbles encircling the bolts and disposed between the knives.

[Claims 6 and 7 not printed in the Gazette.]

1,204,261. CLAY-PURIFIER. OTTOMAR OSKAR ERFURTH, Teuchern, Germany. Filed Oct. 16, 1915. Serial No. 56,253. (Cl. 83—56.)

1. A clay purifier comprising in combination two cylindrical sieves, screw conveyers with equally directed pitch arranged co-axially within the cylindrical sieves, stone receiving boxes at one end, a charge box at the other end of each of the cylindrical sieves and driving gear by means of which the direction of rotation of the screw conveyers may be reversed, substantially as set forth.

2. A clay purifier comprising in combination two cylindrical sieves in co-axial arrangement, a charge box intermediate of and connecting the inner ends of the two cylindrical sieves, a stone receiving box at the outer end of each cylindrical sieve and two screw conveyers with equally directed pitch arranged co-axially within the cylindrical sieves and meeting within the said charging box, substantially as set forth.

3. A clay purifier comprising in combination two cylindrical sieves in co-axial arrangement, a charge box intermediate of and connecting the inner ends of the two cylindrical sleeves, a stone receiving box at the outer end of each cylindrical sieve, two screw conveyers with equally directed pitch arranged co-axially within the cylindrical sieves and meeting within the said charge box, and a common shaft for the two screw conveyers with a driving gear enabling the rotation of the said conveyers to be reversed, all substantially as described and for the purpose specified.

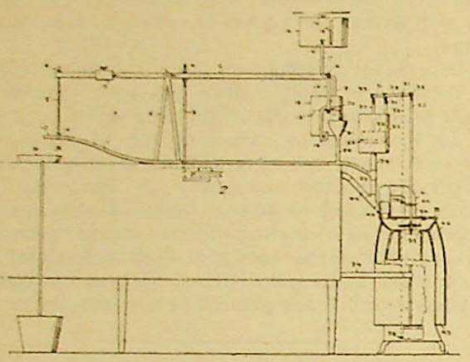
4. In a clay purifier, in combination, a screw conveyer, a sieve associated with each end thereof for alternate use, means for admitting a charge to said conveyer at a point between said sieves, and a reversible drive for operating said conveyer in either direction whereby the charge is selectively delivered to the sieve toward which the conveyer is operated.

5. In a clay purifier, in combination a plurality of sieves for alternate use, conveyer means associated therewith, and means for reversibly operating said conveyer means to feed the material toward and away from said sieves respectively.

1,204,262. TEMPERATURE-CONTROL DEVICE. HENRY H. FEHRENSCHILD, Rivervale, N. J. Filed Feb. 18, 1916. Serial No. 79,064. (Cl. 236—6.)

1. The combination in a temperature control device, of a thermostatic device provided with a movable member; a balance beam; a rod connecting the said movable member and the said balance beam; a conduit pipe carried by

the said balance beam and connected with a supply tank containing water and adapted to supply such water by the movement of the balance beam and conduit to an expansion tank; an expansion tank, provided with a movable member operated by the water supplied by the conduit pipe; and means of temperature variation, adapted to be controlled by the action of said movable member.

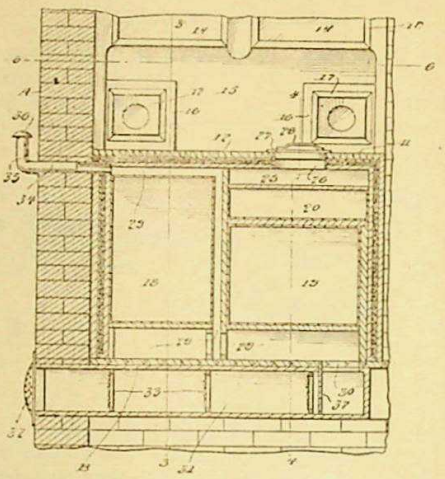


2. The combination in a temperature control device, of a thermostatic device provided with a movable member; a balance beam; a rod connecting the said movable member and the said balance beam; a conduit pipe carried by the said balance beam and connected with a supply tank containing water and adapted to supply such water by the movement of the balance beam and conduit pipe to an expansion tank; an expansion tank provided with a float operated by the water supplied by the conduit pipe; rods adapted to be operated by the action of the float; and a heater provided with draft dampers operated by said rods.

3. The combination, in a temperature control device, of a thermostatic device provided with a movable member actuated by variations in temperature; a balance beam operated by such member and provided at one end with a crossing arm carrying two water conduits the ends of which are equidistant from the end of the balance beam; an air-tight water tank connected with one conduit, the open end of which conduit is disposed in a supply tank from the bottom of which supply tank extends the other conduit carried by the arm of the balance beam; a drip cup adapted to catch the water issuing from the open end of the second conduit and provided with a conduit connected with an expansion tank which is connected with a hot water circulating system and provided with a waste pipe, the end of which is connected with the end of the balance beam opposite to the end provided with the arm; a float in the expansion tank actuated by the expansion and contraction of the water in the system, and connecting means for affecting by the action of such float the heating means used in connection with the hot water circulating system.

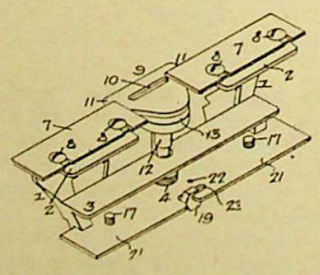
4. The combination, in a temperature control device, of a thermostatic device provided with a movable member actuated by variations in temperature; a balance beam operated by such member and provided at one end with a crossing arm carrying two water conduits, the ends of which conduits are equi-distant from the end of the balance beam; an air-tight water tank connected with one conduit, the open end of which conduit is disposed in a supply tank from the bottom of which supply tank extends the other conduit carried by the arm of the balance beam; a drip cup adapted to catch the water issuing from the open end of the second conduit and provided with a conduit connected with an expansion tank which is connected with a hot water circulating system and provided with a waste pipe, the end of which is connected with the end of the balance beam opposite to the end provided with the arm; a float in the expansion tank actuated by the expansion and contraction of the water in the system; and a heater provided with a damper and a lower draft door having connections with the float in the expansion tank adapted to operate the damper and lower draft door to open and close the draft through the heater, and provided further with a cooling jacket surrounding the circulating water system of the heater and having a draft flue provided with a damper having a connection with the float in the expansion tank adapted to open and close the draft through the cooling jacket.

1,204,263. CABINET. HARRY C. FRATT, Norristown, Pa. Filed Apr. 3, 1914. Serial No. 829,359. (Cl. 45—71.)



In combination with a supporting element having an opening, an ice box comprising a rectangular hollow body having an opening in its top wall and resting upon said element, a rectangular food container mounted within said body and having a top wall spaced from said body and a bottom wall spaced from said element, an ice receptacle mounted in said body and having one wall spaced from said food container and a bottom wall spaced from said element, a water tank supported in said body in position upon said ice receptacle and spaced from said food container, a storage receptacle mounted on said water tank and spaced from said food container, said storage receptacle being mounted directly below the opening in the top wall of said body, a pipe establishing communication between the atmosphere and the space between the top wall of said container and the interior surface of said body, an air conduit establishing communication between the space under said bottom wall of said ice receptacle and the atmosphere through said opening in the element and a damper for closing the passage in said conduit.

1,204,264. CROSSCUT-SAW TOOL. SAMUEL T. FREAS, Trenton, N. J., assignor to Henry Disston & Sons, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 20, 1914. Serial No. 846,348. (Cl. 33—202.)

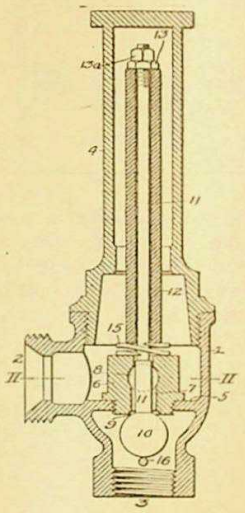


1. The combination in a cross cut saw tool, of a frame; two gage plates spaced apart and mounted on the frame; a raker gage having a slot therein for the raker teeth and having a round spindle mounted in the frame; nuts on the spindle for longitudinally adjusting and locking the raker gage in position, said raker gage having projections at each end extending under the gage plates and

bearing against the rear of the frame so as to hold the gage in proper alinement and to prevent it from turning.

2. The combination in a cross cut saw tool, of a frame having a flange and having a bearing in the flange; a plate resting above the flange and slotted; a gage pin mounted in the bearing and arranged to be clamped by the plate, said gage pin having an eccentric head which projects through the slot in the plate so that, on turning the pin, the head can project to a greater or less extent in order to act as a height gage for the raker teeth.

1,204,265. VALVE. HARRY G. FREEMAN, Atlantic City, N. J., assignor of one-half to William H. Bartlett, Atlantic City, N. J. Filed Jan. 27, 1916. Serial No. 74,666. (Cl. 236—9.)



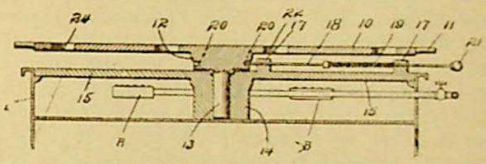
1. A thermostatic valve comprising a body having a closed heating chamber and a wall or diaphragm with a valve seat, a valve adapted to engage said seat from below, a stem carried by said valve and extending through said seat and to a point above the same, an expansion member on the stem above said seat, said member being contained within said heating chamber, means providing a loose connection between said stem and member whereby the latter is free to expand and contract under changes in temperature and seat the valve when moving in one direction and to permit the valve to unseat when moving in the opposite direction, and means contained within said heating chamber between the valve seat and the lower end of the expansion member adapted to compensate for any excess movement of said expansion member.

2. A thermostatic valve comprising a body having a closed heating chamber and a wall or diaphragm provided with a valve seat on its under side, a stem extending through said seat beyond the opposite side thereof and having a valve to engage the seat from below, an expansion member surrounding said stem and contained within said heating chamber so as to be subject to changes of temperature therein, and a spring member between the lower end of the expansion member and the valve seat and contained within said heating chamber, said spring adapted to compensate for any excess movement of the expansion member.

3. A thermostatic valve comprising a body, and a closed body extension thereof said body having a wall or diaphragm with a plug mounted thereon having a valve seat on its underside, said plug being apertured in two directions, a stem within the bonnet of said body and extending through one of the apertures of the plug and having a valve adapted to engage the seat of said plug from below, an expansion member surrounding the valve stem above said plug and contained within the closed bonnet of said body, and means providing a loose connection between said stem and expansion member whereby the latter is free to expand and contract under changes in temperature and to seat the valve when moving in one direction and to permit the valve to unseat when moving in the opposite direction.

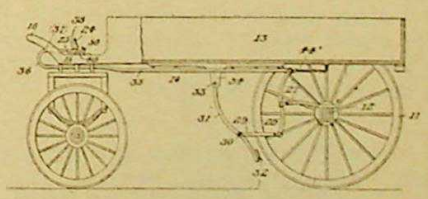
4. A thermostatic valve comprising a body, and a closed bonnet extension thereof said body having a wall or diaphragm with a plug mounted thereon having a valve seat on its underside, said plug being apertured in two directions, a stem within the bonnet of said body and extending through one of the apertures of the plug and having a valve adapted to engage the seat of said plug from below, an expansion member surrounding the valve stem above said plug and contained within the closed bonnet of said body, means providing a loose connection between said stem and expansion member whereby the latter is free to expand and contract under changes in temperature and to seat the valve when moving in one direction and to permit the valve to unseat when moving in the opposite direction, and a coiled spring interposed between the end of the expansion member and the adjacent surface of the plug adapted to compensate for any excess movement of the expansion member.

1,204,266. GAS-RANGE TOP. LEROY GARRISON, Chester, Pa. Filed Feb. 25, 1916. Serial No. 80,513. (Cl. 126—214.)



A gas range top comprising a spider adapted to be detachably mounted upon the range and having a centrally apertured boss, a disk like section forming an adjustable top and having a stud rotatably fitted within the boss, extensions at the periphery of the section and diametrically opposite each other to provide handles, guide lugs formed on the spider, a socketed enlargement formed centrally on the under face of the disk, and a spring held latch rod slidable in the bearing and engageable in any one of the sockets in the enlargement to hold the section locked against movement.

1,204,267. VEHICLE-BRAKE. PIOTR GIBA, Chicago, Ill. Filed Aug. 9, 1916. Serial No. 113,945. (Cl. 21—8.)



1. A wagon brake construction comprising oppositely-positioned resiliently connected toothed jaws, brake setting means shiftably arranged between the said jaws longitudinally thereof in contact therewith, and retracting means for both of said jaws operable at points adjacent the opposite ends of the casing.

2. A brake device comprising in combination with a wagon, a casing arranged within the floor thereof adjacent the driver's seat, brake setting means slidably arranged transversely of the said casing having an operating lever centrally arranged thereabove, oppositely positioned jaws pivoted within said casing having toothed inner faces engaging the said setting means, resilient connections between the said jaws, oppositely-extending retracting arms for the said jaws having their inner ends pivoted to the latter, and lever members positioned adjacent the opposite ends of the casing operatively attached to the said arms whereby the said jaws are simultaneously retracted during the forward swinging movement of either of the said levers.

3. A brake device comprising in combination with a wagon, a casing arranged within the floor thereof adjacent the driver's seat, brake setting means slidably arranged transversely of the said casing having an operating lever centrally arranged thereabove, oppositely positioned jaws pivoted within said casing having toothed inner faces engaging the said setting means, resilient connections between the said jaws, oppositely-extending retracting arms for the said jaws having their inner ends pivoted to the latter, outwardly-positioned gears within the said casing, arms carried by the said gears pivotally attached to the outer ends of the said jaw arms, inwardly-positioned gears arranged between the said outer gears and jaws in constant mesh with the said outer gears, a crank arm carried by one of the said inner gears, pivotal connections between the said crank arm of the inner gear and the crank arm of the outwardly-positioned gear at the opposite end of the casing, and means for revolving one of the said gears whereby the said jaws are separated simultaneously.

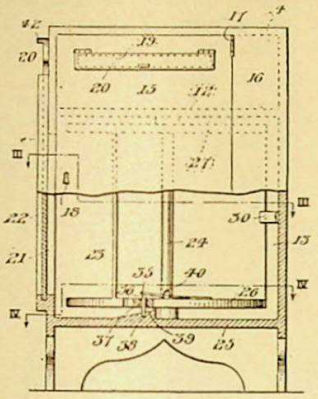
4. A brake device comprising in combination with a wagon, a casing arranged within the floor thereof adjacent the driver's seat, brake setting means slidably arranged transversely of the said casing having an operating lever centrally arranged thereabove, oppositely positioned jaws pivoted within said casing having toothed inner faces engaging the said setting means, resilient connections between the said jaws, oppositely-extending retracting arms for the said jaws having their inner ends pivoted to the latter, outwardly-positioned gears within the said casing, arms carried by the said gears pivotally attached to the outer ends of the said jaw arms, inwardly-positioned gears arranged between the said outer gears and jaws in constant mesh with the said outer gears, a crank arm carried by one of the said inner gears, pivotal connections between the said crank arm of the inner gear and the crank arm of the outwardly-positioned gear at the opposite end of the casing, actuating levers operatively attached to the axles of the said inner gears and arranged above the said casing, foot plates upon the said actuating levers adjacent the opposite sides of the driver's seat, and guide levers for the said foot levers.

5. A device of the class described comprising in combination with a wagon, a brake operating rod longitudinally shiftably arranged beneath the wagon having its forward end slidably positioned through the forward dashboard thereof, a mechanism casing adjacent the driver's seat, a foot lever slidably carried by the said casing attached to the said rod, wheel engaging brake blocks suspended adjacent the rear wheels of the wagon, link fulcrum connections between the said blocks and the rear axle of the wagon pivotally attached to the rear end of the said rod, and a releasing spring for the brakes attached to the rear end of the said rod.

1,204,268. COMBINED MAIL-BOX AND MILK-BOTTLE HOLDER. JOZEPH GONSIOR, WILLIAM FRANK, and CHRISTIAN SCHNEIDER, Medina, N. D. Filed May 27, 1916. Serial No. 100,302. (Cl. 232—41.)

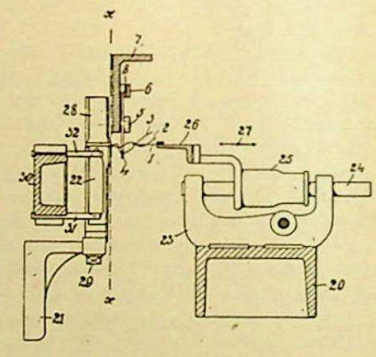
1. A receiving device comprising a casing having an entrance and an exit door, a supporting drum within the said casing comprising a vertical shaft centrally journaled therein, upper and lower disks carried by the said shaft, radially arranged partition plates between the said disks and attached to the said shaft, a lug having an inclined face provided with a recess carried by the bottom of the casing beneath the lower disk of the drum, a normally elevated latch carried by said lower disk, a bolt upon the said latch having a path of movement in the plane of said lug and recess during the operation of the drum, and a releasable detent for the said latch and bolt carried by the said lower disk.

2. A receiving device comprising a casing having an entrance and an exit door, a supporting drum within the said casing comprising a vertical shaft centrally journaled therein, upper and lower disks carried by the said shaft, radially arranged partition plates between the said disks and attached to the said shaft, a lug having an inclined face provided with a recess carried by the bottom of the casing beneath the lower disk of the drum, a normally elevated latch carried by said lower disk, a bolt upon the said latch having a path of movement in the plane of said lug and recess during the operation of the drum, a releasable detent for the said latch and bolt carried by the



said lower disk, the said lower disk having a peripheral notch, a spring stop in resilient engagement with the periphery of the said lower disk and secured to the side of the casing and an inwardly extending stop carried by the rear of the casing within the path of movement of the edge portions of the said plates.

1,204,269. EMBROIDERING-MACHINE. JOSEF GRANZ, Plauen, Germany. Filed Nov. 4, 1914. Serial No. 870,228. (Cl. 112—7.)

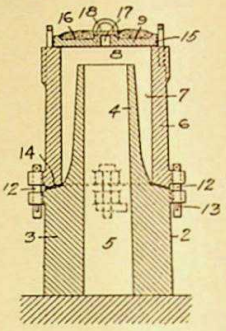


1. In an embroidering machine, needles, a carrier for said needles, means for reciprocating the carrier, levers, each lever having an ornamental-thread guide at one end thereof adapted to describe a substantially circular movement of over three hundred and sixty degrees around a needle and means movable in semi-circular path on which said levers are pivotally mounted.

2. In an embroidering machine for working in an ornamental cord, a carrier provided with needles, a thread guide having an eye adapted to describe a circular movement of over 360 degrees around one only of said needles, a lever, said thread guide being located at the end of said lever, the center of oscillation of which can be moved along a semi-circular path so that the thread guide can travel around the needle and a rail, on which the lever is mounted and adapted to be moved along said semi-circular path.

3. In an embroidering machine for working in an ornamental cord, thread guides each having an eye, said thread guides being mounted to describe a circular movement of over 360° each around a single needle only, a lever for each guide, the eye of each of said thread guides being located at the end of its lever, a rail movable in a semi-circular path and on which said levers are pivotally mounted, and a second rail to which the outer ends of said levers are connected.

1,204,270. INGOT-MOLD. CHARLES W. GREENE, Pittsburgh, Pa.; Helen Greene administratrix of said Charles W. Greene, deceased. Filed Jan. 5, 1914. Serial No. 810,367. (Cl. 22—144.)



1. An ingot mold having a main body portion and having a casing around the upper part thereof, and extending above the mold proper and providing a dead-air chamber around the same, an inclosing cap or cover supported on said outer casing and having a sealed joint therewith.

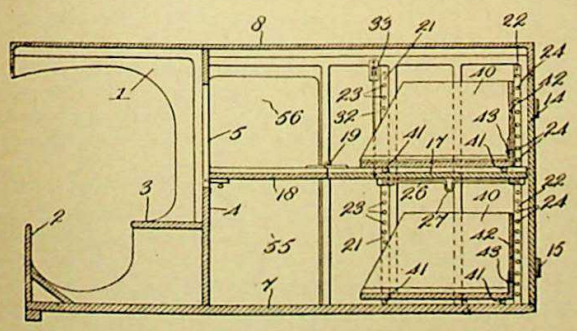
2. An ingot mold having a main body portion to retain the ingot, a casing around the same providing a dead air chamber and a cap or cover seated and sealed on top of the casing and having a relief opening therein.

3. An ingot mold having a main body portion, a separate casing extending around and above the upper part of the body portion and forming a dead-air space around and above the same, a cap or cover fitting on the casing, the joints between the casing and the mold body and cap being sealed.

4. An ingot mold having a main body portion to retain the ingot and having a separate casing fitting around the upper part of the main body portion forming a dead air space around the top of the mold and having carrying lugs, and connecting means between said casing and body portion providing for the carrying of the mold by means of the casing.

5. An ingot mold having a main body portion to retain the ingot and having a separate casing fitting around the upper part of the main body portion forming a dead air space around the top of the mold and having carrying lugs, said casing and body portion each having lugs and bolts passing through the same and keyed to connect them so providing for carrying of the mold by means of the casing.

1,204,271. DELIVERY VEHICLE-BODY. ROBERT E. GREENE, Memphis, Tenn. Filed Apr. 24, 1916. Serial No. 93,269. (Cl. 21—7.)

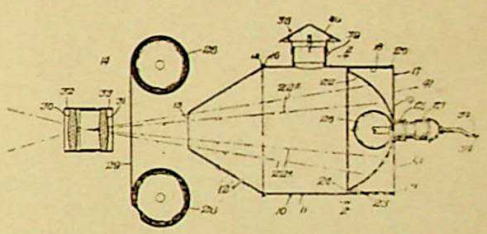


1. In a delivery body for wheeled vehicles, the combination of a driver's seat; a horizontally disposed readily adjustable false bottom located in rear of said seat; said bottom having a hinged section near said seat; means for securing said bottom in various adjusted positions; and a receptacle of a less length than said bottom adapted to be readily moved backward and forward thereon, and a receptacle of less length than the unhinged portion of said bottom located beneath the same and adapted to be moved backward and forward in the vehicle body, substantially as described.

2. In a delivery body for wheeled vehicles the combination of a driver's seat; a door in the side of said vehicle; a horizontally disposed readily adjustable false bottom located in rear of said seat and adapted to be loaded from said door; said bottom having a hinged section near said seat; means for securing said bottom in various adjusted positions; and a receptacle of a less length than said bottom adapted to be readily moved backward and forward thereon, substantially as described.

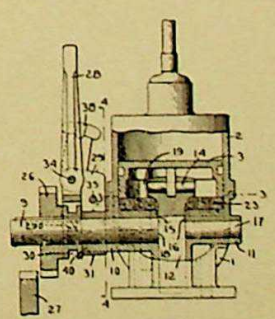
3. In a delivery body for wheeled vehicles, provided with a side and a rear door, the combination of a driver's seat; a horizontally disposed readily adjustable falst bottom located in rear of said seat and adapted to be loaded from said doors; said bottom having a hinged section near said seat; means for securing said bottom in various adjusted positions; and a receptacle of a less length than said bottom adapted to be readily moved backward and forward thereon, substantially as described.

1,204,272. LIGHT-PROJECTING APPARATUS. FRANK A. HARDYMAN, Quincy, Ill., assignor to Automatic Gas Power Company, Quincy, Ill., a Corporation of South Dakota. Filed Sept. 7, 1915. Serial No. 49,380. (Cl. 240—41.)



A light projecting apparatus adapted for use with a cinematograph or other picture projecting device, comprising a lamp house having a tubular body portion, a conical hood secured to one end of said body portion and having at its outer end an uncovered, light-emitting opening, a concave reflector completely closing the outer end of said body portion, and an incandescent electric lamp located in said lamp house and attached to said reflector.

1,204,273. AIR-PUMP. ROLAND C. HILTON, Boston, Mass., assignor to West Side Foundry Company, Colonie, N. Y., a Corporation of New York. Filed Jan. 27, 1916. Serial No. 74,703. (Cl. 230—27.)

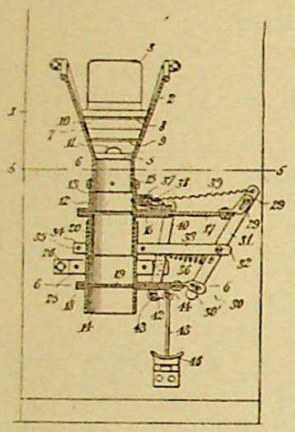


1. In a pump, the combination with a pump casing having a shaft bearing provided with a hub, of a driving shaft in said bearing, a piston operated by said shaft, a gear slidably mounted on the shaft, a bracket adjustably mounted on said hub and presenting a portion which surrounds the hub and also presenting two arms, a gear-shifting lever situated between said arms and pivotally connected thereto, and means for clamping the bracket to the hub in any adjusted position, one of said arms being longer than the other and being resilient, said arm carrying a projection adapted to engage the lever in different positions thereof and yieldingly hold it in adjusted position.

2. In a pump, the combination with a pump casing having a shaft bearing provided with a hub, of a driving shaft in said bearing, a piston operated by said shaft, a

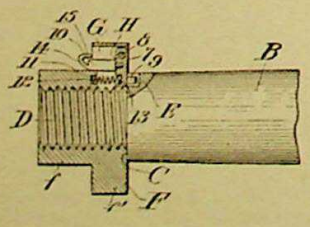
gear slidably mounted on the shaft, a bracket adjustably mounted on the hub, and a gear-shifting lever pivoted to said bracket and by which said gear can be shifted longitudinally of said shaft, said bracket having a resilient extension provided with a locking projection which is adapted to engage the lever and yieldingly hold it in different adjusted positions.

1,204,274. BAG-FILLING MACHINE. JOHN W. HOWARD, Valley Falls, R. I. Filed Aug. 7, 1915. Serial No. 44,181. (Cl. 221—113.)



A bag filling apparatus including a hopper having a discharge outlet, a nozzle detachably connected with the outlet, said nozzle being provided with a pair of superposed guideways, valve plates movable in said guideways across the bore of the nozzle, a support carried by the nozzle, a rocker lever pivotally mounted on said support and having a long arm and a short arm, angularly disposed coupling members upon the valve plate disposed at reverse angles to each other and slidably and pivotally connected with the respective long and short arms of the rocker lever, a bell crank actuating lever having a long arm and a short arm, a flexible connection between the long arm of said lever and the long arm of the rocker lever, said connection being at an intermediate point in guided connection with the nozzle, a contractile spring connecting the nozzle with the short arm of the rocker lever adjacent to the pivot point thereof, and operating means connected with the short arm of the bell-crank actuating lever for moving the parts in opposition to the spring.

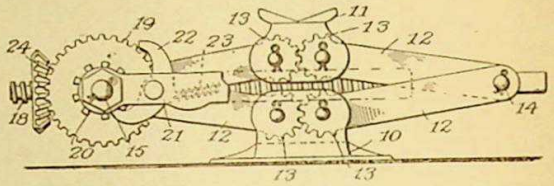
1,204,275. LOCK-NUT. GEORGE HUETTNER, New York, N. Y. Filed June 20, 1914, Serial No. 846,349. Renewed Mar. 30, 1916. Serial No. 87,855. (Cl. 151—6.)



1. The combination with a nut having a chamber formed radially therein, of a ratchet locking device pivoted at its outer end in said chamber, the nut having a lateral wall projecting beyond said chamber, and an operating piece carried by said locking device and normally engaging said projecting lateral wall of the nut, whereby said operating piece must be moved outwardly in a radial line for releasing the locking device.

2. The combination with a nut having a chamber formed radially therein, of a ratchet locking device pivoted at its outer end in said chamber, the nut having a lateral wall projecting beyond said chamber, and an operating piece carried by said locking device and normally engaging said projecting lateral wall of the nut, whereby said operating piece must be moved outwardly in a radial line for releasing the locking device, the end of said operating piece being inclined on the side facing said projecting lateral wall of the nut, for the purpose specified.

1,204,276. JACK. ALVIN L. JOHNSON, Worcester, Mass., assignor, by mesne assignments, to Hi-Lo Jack Company, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 18, 1915. Serial No. 46,185. (Cl. 254—126.)



1. In a jack, the combination of a supporting base, a pair of links pivotally supported thereon, integral means on said links for causing them to partake of each other's movement and to rise or fall together about their pivots, a second pair of links pivoted to the free ends of the first pair and pivotally connected at their other ends, a rest carried by the second pair of links, means integral with the second pair of links for causing them to move simultaneously in opposite directions, and means for moving the pivotal connections between the two pairs of links toward or from each other to raise or lower the rest.

2. In a jack, the combination of a supporting base, a pair of links pivotally supported thereon, a second pair of links pivoted to the free ends of the first pair and pivotally connected at their other ends, a rest carried by the second pair of links, means integral with the second pair of links for causing them to move simultaneously in opposite directions, and means for moving the pivotal connections between the two pairs of links toward or from each other to raise or lower the rest.

3. In a jack, the combination of a supporting base, two pairs of links pivoted together to form a parallelogram, means integral with certain of said links for causing the two on one side to move with those on the other side of the base, but to move oppositely, a rest at the top connected with the links, and means for directly forcing said links toward or from each other at the center to raise or lower the rest.

4. In a jack, the combination of a supporting base, two pairs of links pivoted together to form a parallelogram, means integral with certain of said links for causing the two on one side to move with those on the other side of the base, but to move oppositely, a rest at the top connected with the links, a non-rotatable horizontal screw having a uniform thread from end to end, pivotally connected with the point at which the links on one side are pivoted together and slidably connected with the opposite pivotal point, a nut fitting the screw-threads and entirely free from the slidable connection, and means for turning the nut.

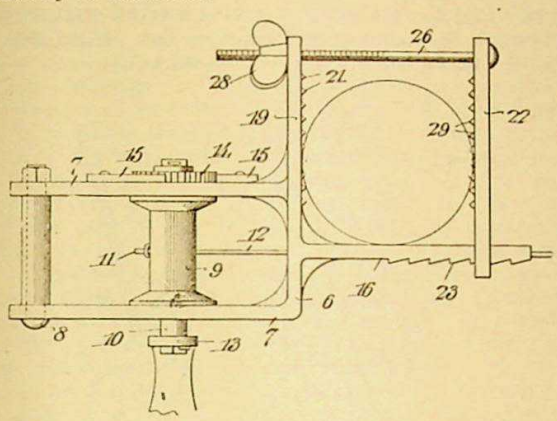
5. In a jack, the combination of a base, a pair of links pivoted thereto, a second pair of links each pivotally connected with one of the other links and pivotally connected together, a work rest carried thereby opposite the base, a screw for forcing the connected ends of the two pairs of links toward or from each other, and means independent of said screw and located on the second pair of links for causing the links of the pairs to move simultaneously and equally.

[Claims 6 to 8 not printed in the Gazette.]

1,204,277. WIRE-STRETCHER. LEON KASPRZYK, Kosciusko, Tex. Filed Mar. 9, 1916. Serial No. 83,106. (Cl. 254—162.)

1. In a device of the class described, a frame having a pair of spaced parallel bars, a drum mounted for rotation between said bars, a pair of forwardly projecting parallel

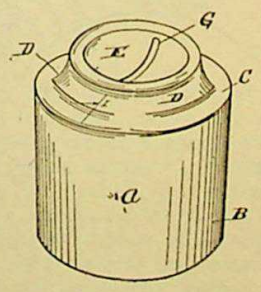
arms secured to said frame intermediate said bars, a guide roller mounted on each of said arms remote from said drum with their peripheries in alinement with said drum at diametrically opposite points, means for rotating said drum, and means for securing said frame to a post, substantially as described.



2. In a device of the class described, a frame having a pair of spaced forwardly and laterally projecting arms, ratchet teeth on said forwardly projecting arms, a member connecting the extremities of said laterally projecting arms, grip member, a pair of projections arranged in spaced relation upon said grip member at one end for engagement with the ratchet teeth on said forwardly projecting arms, a screw bolt connected to the opposite end of said grip member and extending at its free end adjacent said member, the said member being provided with a slot open at one end for the reception of said bolt end, and a nut for engagement over said bolt end, substantially as described.

3. In a device of the class described, a frame, a pair of spaced parallel bars projecting rearwardly from said frame, a drum mounted for rotation between said bars and at a point midway between the lateral edges thereof, a pair of spaced arms secured to project forwardly from said frame at a point midway between said bars, a roller secured to the extreme end of each of said arms, the said rollers having their peripheries in the same plane with that of diametrically opposite points on said drum, a ratchet connection between said drum and said frame, means for rotating said drum, and means for securing said frame upon a post, substantially as described.

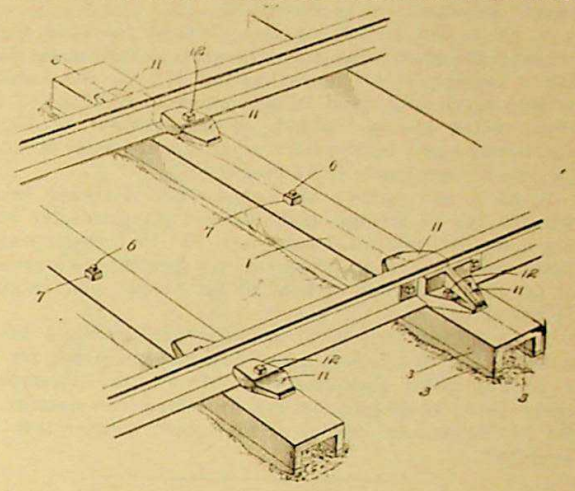
1,204,278. TIP FOR GAS-BURNERS. PETER KELLER, Chicago, Ill. Filed Aug. 5, 1916. Serial No. 113,326. (Cl. 67—112.)



A gas burner tip consisting of a hollow body or shell, provided with a raised ring or neck completely encircling the top of said tip, the top surface of said ring or neck having an elongated slot and being concaved and forming a reservoir or circular chamber.

1,204,279. METAL TIE. PETER KERZE, Ely, Minn. Filed Mar. 14, 1916. Serial No. 84,147. (Cl. 238—5.)

1. A metal tie comprising two similar trough-shaped members adapted to have their edges rest one on the other, each of the members having transverse partitions, the partitions in one of the members having extending tongues and the partitions of the other member having pockets to receive the tongues, and means for connecting the members.



2. In a metal tie, two trough-like members having their edges resting one upon the other, each of the members adjacent its ends having transhverse partitions, the partitions upon one of the members having projecting tongues, the partitions of the other member having pockets to receive the tongues, and a single element passing through sections centrally thereof for connecting the said sections.

3. In a metal tie, two similar sections, each including a straight member having its sides formed with right angular flanges, and the edges of the flanges resting one upon the other, each of the members having integral transverse partitions, the partitions of one of the members being formed with extending tongues, the partitions of the other member being recessed to provide pockets to receive the tongues, a single element passing centrally through the members for connecting the same, the upper member having its top provided with threaded openings and with depressions disposed outward of the openings, whereby bolt members passing through rail engaging elements may connect the elements to the ties and retain lugs provided in the said elements in the depressions in the tie.

1,204,280. MANUFACTURE OF BREAD. HENRY A. KOHMAN, TRUMAN M. GODFREY, and LAUREN ASHE, Pittsburgh, Pa., assignors to Ward Baking Company, New York, N. Y., a Corporation of New York. Filed Oct. 19, 1915. Serial No. 56,710. (Cl. 99—10.)

1. The method of making leavened bread, which comprises bringing a hard fat into homogeneous admixture with the flour, yeast, and other ingredients of the dough batch, and fermenting the batch; substantially as described.

2. The method of making leavened bread, which comprises bringing a hard fat into homogeneous admixture with the flour, yeast, and other ingredients of the dough batch, said homogeneous admixture being induced by first melting the fat and bringing it into a pulverulent condition, and fermenting the batch; substantially as described.

3. The method of making leavened bread, which comprises bringing a hard fat into homogeneous admixture with the flour, yeast, and other ingredients of the dough batch, said homogeneous admixture being effected by melting the fat, and bringing it into a pulverulent condition by absorption in a pulverulent carrier, and fermenting the batch; substantially as described.

1,204,281. LEAVENED BREAD. HENRY A. KOHMAN, TRUMAN M. GODFREY, and LAUREN H. ASHE, Pittsburgh, Pa. Filed Aug. 16, 1916. Serial No. 115,152. (Cl. 99—10.)

1. As a new article of manufacture, leavened bread wherein the shortening agent present comprises fat hav-

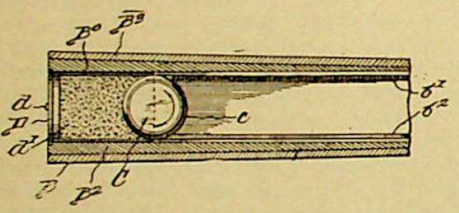
ing a melting point not less than 35° C., the amount of said shortening agent in proportion to the flour of the bread being but a fraction of the amount of liquid shortening agent required for producing the same shortening effect; substantially as described.

2. As a new article of manufacture, leavened bread wherein the shortening agent present comprises fat having a melting point approximating 57° C., the amount of said shortening agent in proportion to the flour of the bread being but a fraction of the amount of liquid shortening agent required for producing the same shortening effect; substantially as described.

3. As a new article of manufacture, leavened bread wherein the shortening agent present comprises fat having a melting point not less than 35° C. the shortening agent being present in proportion not exceedig five pounds of fat to 880 pounds of flour of the bread; substantially as described.

4. As a new article of manufacture, leavened bread wherein the shortening agent present comprises fat of a melting point approximating 57° C., the shortening agent being in proportion not exceeding two pounds of fat to 880 pounds of flour of the bread; substantially as described.

1,204,282. DISK-THROWING GUN. ROBERT H. LAKE, U. S. Navy. Filed Jan. 22, 1916. Serial No. 73,667. (Cl. 89—14.)



1. A gun of the character described provided with a bore elongated in cross section and provided with a plane surface along one side thereof, and with a series of teeth in the opposite side thereof, said plane surface permitting the sliding of the edge of a disk-shaped projectile thereon, and the said teeth imparting to said projectile a rotary motion during its passage through the bore, substantially as and for the purposes described.

2. A gun of the character described provided with a bore elongated in cross section and having flat top and bottom walls, and side walls, the side wall at one side of the bore being plane, and the opposite side wall being provided with teeth whereby one edge of a disk-shaped projectile is free to slide freely along one side of said bore, while there is imparted to it a rapid spinning motion by the teeth at the other side of said bore, substantially as and for the purposes described.

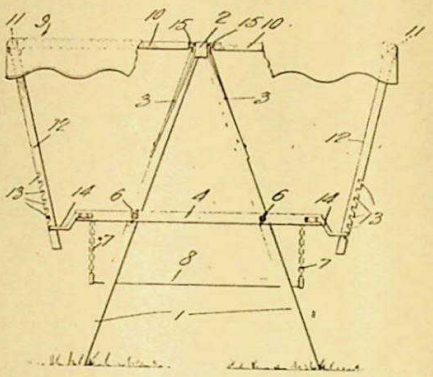
3. A gun of the character described provided with a bore elongated in cross section and having flat top and bottom walls, and inclined side walls, the side wall at one side of the bore being plane, and the opposite side wall being provided with teeth whereby one edge of a disk-shaped projectile is free to slide freely along one side of said bore, while there is imparted to it a rapid spinning motion by the teeth at the other side of said bore, substantially as and for the purposes described.

4. A gun of the character described provided with a bore elongated in cross section and having flat top and bottom walls, and inclined side walls flaring outward from the bottom upward, the side wall at one side of the bore being plane, and the opposite side wall being provided with teeth whereby one edge of a disk-shaped projectile is free to slide freely along one side of said bore, while there is imparted to it a rapid spinning motion by the teeth at the other side of said bore, substantially as and for the purposes described.

5. In a gun of the charatcer described, the combination with a barrel provided with a bore elongated in cross section and provided with a plane surface along one side thereof, and with a series of teeth in the opposite side thereof, of a disk-shaped projectile having edges adapted to slide freely along said plane surface, and to engage and be rotated by said teeth, substantially as and for the purposes described.

[Claims 6 to 15 not printed in the Gazette.]

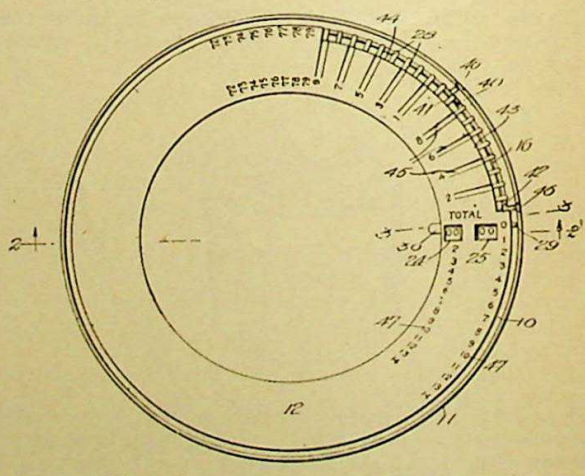
1,204,283. HAMMOCK AND CANOPY THEREFOR. THOMAS M. LANCASTER, Pasadena, Cal. Filed Feb. 16, 1915. Serial No. 8,513. (Cl. 5—32.)



1. The combination of a supporting frame comprising two A-shaped members connected at their upper ends by a longitudinal bar, a two-part canopy frame pivoted on each side of said bar and having parallel side and end members, a transverse supporting bar carried by each of said A-shaped members intermediate of their ends and projecting beyond the sides thereof, and means carried by the said frame and the outer ends of the last-named bars whereby the angle of each part of said frame may be varied independently and in respect to each other.

2. The combination of a supporting frame comprising two A-shaped members connected at their upper ends by a longitudinal bar, a two-part canopy frame pivoted on each side of said bar and having parallel side and end members, a transverse supporting bar carried by each of said A-shaped members intermediate of their ends and projecting beyond the sides thereof, brackets carried on the outer ends of each of said last-named bars, and links pivotally carried by the sides of said cover frame having their lower ends adapted to engage the brackets upon said bar.

1,204,284. ADDING-MACHINE. ARTHUR W. LAWRENCE, New York, N. Y. Filed May 1, 1916. Serial No. 94,677. (Cl. 235—78.)



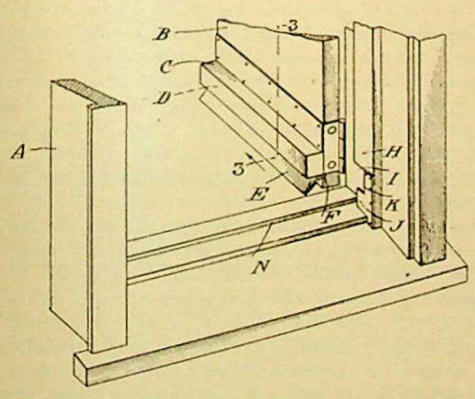
1. An adding device comprising a casing including a base plate and a cover plate, a counting ring rotatably held between said base and cover plates and covered and protected thereby, means consisting of teeth on the counting ring which may be engaged by a pencil to rotate the ring, said teeth extending to the peripheral edge only of the cover plate, the said cover plate being cut away partly along its outer peripheral edge to form a keyboard and

expose certain of the said pencil-engaging teeth, and the said base plate having its outer peripheral edge extended beyond the outer peripheral edge of the cover plate and provided with an upstanding annular rib opposing the said edge of the cover plate in spaced relation and forming an annular groove therebetween, one of the teeth of the said ring being extended beyond the peripheral edge of the cover plate and into the said groove to form a zero-setting member.

2. An adding device of the type described comprising a base plate, a cover plate disposed thereon in spaced relation, a counting ring rotatable between the said plates, and provided with stylus engaging means whereby it may be manually rotated, said ring being provided with a radially outstanding zero-setting finger and the outer peripheral edge of the base plate having an upstanding annular rib beyond the end of said zero setting finger and in spaced relation to the outer edge of the cover plate to form an annular upwardly opening groove in which the said finger is protected and movable whereby to protect the said zero-setting finger and prevent accidental displacement of the said counting ring.

3. An adding device of the type described comprising a base plate, a cover plate disposed thereon and provided with an annular rib upon its lower surface provided with a cut-out portion, inner and outer counting rings rotatable between the cover and base plates upon relatively opposite sides of said rib, the inner ring of which is provided with a peripheral series of teeth upon its outer edge, and a locking ball disposed in the cut-out portion of the rib and confined therein and normally shifted into engagement with the teeth of the inner ring to lock the latter against rotation, by the inner peripheral edge of the outer ring, the said outer ring having a portion of its inner edge cut away at one point to receive the said locking ball and free the inner ring for movement.

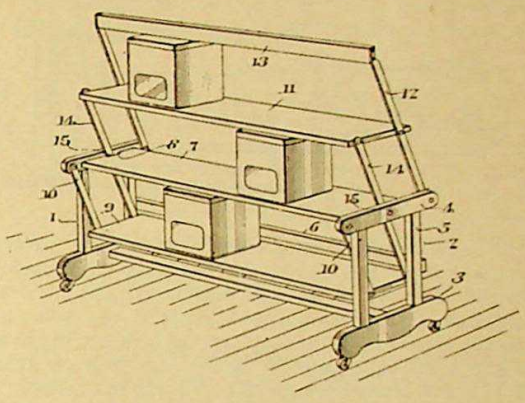
1,204,285. WEATHER-STRIP. WILLIAM LAYTON, Seagirt, N. J. Filed Dec. 15, 1915. Serial No. 66,977. (Cl. 20—65.)



In combination with a sill having the side over which the door travels inclined, and having a shoulder on its opposite side, a door having a transverse groove adjacent its lower end, a casing having an inturned end terminating directly over the transverse groove, a weather strip having a laterally extending cylindrical portion supported within the casing and capable of pivoting in the groove so that the weather strip may swing up as the door opens or may move vertically over the inclined surface of the sill as the door closes and fall behind the shoulder, causing a binding action between the inturned edge of the casing and upper edge of the transverse groove when the door is moved to a closed position.

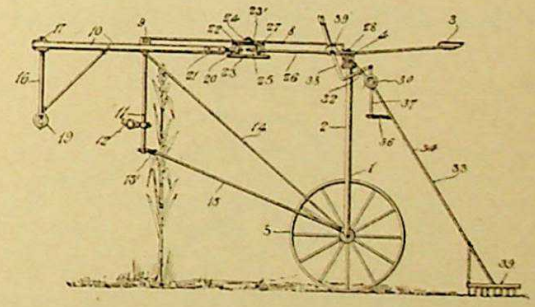
1,204,286. DISPLAY-RACK. FREDERICK LENGQUIST and JAMES P. WILES, Joplin, Mo. Filed Jan. 12, 1915. Serial No. 1,833. (Cl. 211—24.)

In a device of the kind described in combination, a pair of spaced apart standards, a horizontally-disposed top piece secured upon each standard, a pin projecting from the inner side of each top piece, a link rod centrally fulcrumed upon each pin, a pair of flat longitudinal platforms arranged respectively above and below said top pieces, one of said platforms being pivotally secured to the upper ends of said link rods and the other platforms being pivotally connected to the lower ends thereof, a pair of pivotally suspended supporting bars secured to said top pieces



and pivotally connected to the platform below said top pieces, supporting bars pivotally connected to said top pieces and to the platform thereabove, and a fixed shelf secured with end edges against the inner sides of said top pieces, said shelf being formed upon its opposite end edges with alining rectangular recesses against either of the parallel edges of which said link rods may incline and be supported.

1,204,287. CULTIVATOR. GEORGE C. LEWIS, Cedar, Kans. Filed Aug. 7, 1914. Serial No. 855,661. (Cl. 97—44.)



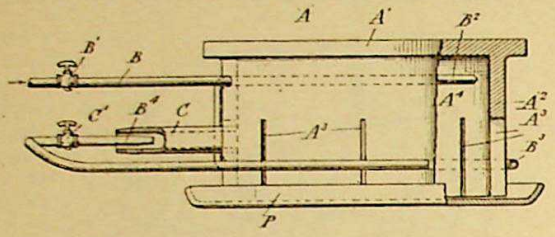
1. In a cultivator, a U-shaped supporting axle having an arch of exaggerated height so as to pass over tall corn, a cross bar connected to said arch, a plurality of cultivating element supporting bars supported by said cross bar and positioned rearwardly and downwardly therefrom, a plurality of cultivating elements supported by said cross bar, and means for raising and lowering said cultivating element supporting bars for moving said cultivating elements into or out of an operative position.

2. In a cultivator, the combination, of a U-shaped axle having an arch of exaggerated height, a cross bar connected to said arch, a plurality of rods pivotally connected to said cross bar, a plurality of cultivating element supporting rods carried by said bar, cultivating element supporting frames connected to said rods, springs connected to said frames and said rods, cultivating elements connected to the lower rear ends of said frame, and a hand lever connected to said rods for moving said cultivating elements into or out of a cultivating position.

1,204,288. LIQUID-FUEL BURNER. JOSEPH C. LOCKHART, Attica, Kans. Filed Apr. 4, 1916. Serial No. 88,862. (Cl. 158—53.)

1. A hydro-carbon burner comprising a plate having a depending flange with openings leading from the lower edge of the flange and terminating short of the lower side of the plate, a nipple mounted upon the flange and

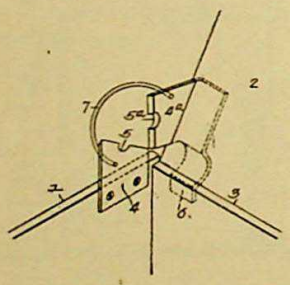
communicating with the space surrounded by the flange at a point between the ends of the openings, and a pipe passing through the flange at a point above the openings and coiled within the flange and passing out of the same and surrounding the flange between the ends of the openings and having its discharge end alined with the nipple.



2. A hydro-carbon burner comprising a plate having a flange depending therefrom and provided with openings leading in from its lower edge and terminating short of the plate, a pipe passing through the flange and coiled within the same and extending out through the flange and down along the outer surface thereof and passing around the flange in a plane between the ends of the openings and having a discharge end disposed toward the flange and spaced from the same, and a nipple mounted upon the flange and communicating with the interior thereof and alined with the discharge end of the pipe.

3. A hydro-carbon burner comprising a plate having a depending flange, a nipple mounted upon the flange and communicating with the interior thereof, and a pipe passing through the flange and coiled therein, then passing through the flange and coiled about the same below the nipple and having a discharge end alined with the nipple.

1,204,289. COMBINED CIGAR-CUTTER AND LID-HOLDER. WILLIAM S. LUCKETT, Philadelphia, Pa. Filed Oct. 10, 1914. Serial No. 866,093. (Cl. 131—38.)



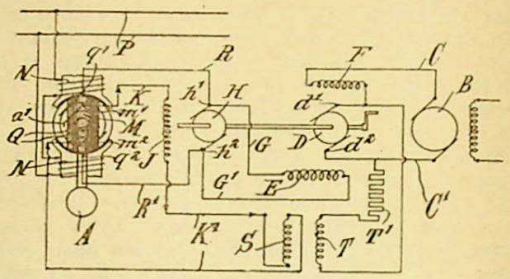
1. In a combined cigar tip cutter and box lid support, the combination of clips carried by said box and lid, and coöperative cutting members pivotally connected to said clips, said cutting members being movable with respect to each other to effect the cutting action by operating the lid.

2. In a combined cigar tip cutter and box lid support, the combination of clips carried by said box and lid, co-operative cutting members pivotally connected to said clips, said cutting members being movable with respect to each other to effect the cutting action, and means for restoring said cutters to a receptive position, said members in their inactive position serving to hold the box lid open.

3. In a combined cigar tip cutter and box lid support, the combination of clips carried by said box and lid, co-operative members pivotally connected to said clips, and complemental cutting edges carried by said members, the latter being movable with respect to each other to effect the cutting action by operating the lid.

1,204,290. ELECTRIC MOTOR. WILHELM LUYKEN, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp, Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Dec. 13, 1913. Serial No. 806,548. (Cl. 172—237.)

1. Device for transforming a periodically variable motion of small energy to a motion of great energy both following similar laws; comprising an electric generator and means for driving the armature of said generator in accordance with said first motion, a circuit conducting the current generated in said armature, a separately excited electric motor for producing said second motion, a controlling generator of low magnetic saturation, the armature winding of said controlling generator being connected to the armature winding of said motor; said controlling generator being provided with a field winding excited by current dependent on the electromotive force of the armature of the first-named generator; and means for so displacing the phase of the current in said winding, that the phase of this current is in advance of the electromotive force generated in the armature of said first-named generator.



2. Device for transforming a periodically variable motion of small energy to a motion of great energy both following similar laws; comprising an electric generator and means for driving the armature of said generator in accordance with said first motion, a circuit conducting the current generated in said armature, a separately excited electric motor for producing said second motion, a controlling generator of low magnetic saturation, the armature winding of said controlling generator being connected to the armature winding of said motor; said controlling generator being provided with a field winding excited by current dependent on the electromotive force of the armature of the first-named generator, means for so displacing the phase of the current in said winding that the phase of this current is in advance of the electromotive force generated in the armature of said first-named generator, said first-named generator being provided with a field winding separately excited from a direct current network, and with an open armature winding and slip rings, the ends of said armature winding being connected to said slip rings.

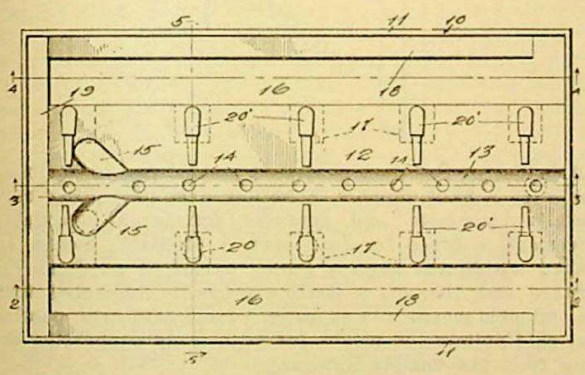
3. Device for transforming a periodically variable motion of small energy to a motion of great energy both following similar laws; comprising an electric generator and means for driving the armature of said generator in accordance with said first motion, a circuit conducting the current generated in said armature, a separately excited electric motor for producing said second motion, a controlling generator of low magnetic saturation, the armature winding of said controlling generator being connected to the armature winding of said motor; said controlling generator being provided with a field winding excited by current dependent on the electromotive force of the armature of the first-named generator, means for so displacing the phase of the current in said winding, that the phase of this current is in advance of the electromotive force generated in the armature of said first-named generator, said first-named generator being provided with a field winding separately excited from a direct current network, and with an open armature winding and slip rings, the ends of said armature winding being connected to said slip rings and the armature of said first-named generator being provided with a second winding connected to the armature of said controlling generator for compensating the torque absorbed by said first armature winding.

4. Device for transforming a periodically variable motion of small energy to a motion of great energy both following similar laws; comprising an electirc generator and means for driving the armature of said generator in accordance with said first motion, a circuit conducting the

current generated in said armature, a separately excited electric motor for producing said second motion, a controlling generator of low magnetic saturation, the armature winding of said controlling generator being connected to the armature winding of said motor; said controlling generator being provided with a field winding excited by current dependent on the electromotive force of the armature of the first-named generator; and a transformer having a primary and a secondary winding and a non-inductive resistance, said primary winding and said resistance being connected in series to each other and to the armature of said controlling generator, and said secondary winding being inserted in said circuit containing said excited winding.

5. Device for transforming a periodically variable motion of small energy to a motion of great energy both following similar laws; comprising an electric generator and means for driving the armature of said generator in accordance with said first motion, a circuit conducting the current generated in said armature, a separately excited electric motor for producing said second motion, a controlling generator of low magnetic saturation, the armature winding of said generator being connected to the armature winding of said motor, an exciting winding for said controlling generator, an exciting generator of low magnetic saturation having an armature and a field winding, the armature of said exciting generator being connected to said exciting winding and the field winding of said exciting generator being inserted in said circuit; means for so displacing the phase of the current in said field winding, that the phase of this current is in advance of the electromotive force generated in the armature of said first-named generator; and means for destroying the residual magnetism in said exciting generator.

1,204,291. GAME APPARATUS. JOHN LYNN MCCASKEY, Pittsburgh, Pa., assignor to Pittsburgh Game & Novelty Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 10, 1916. Serial No. 77,473. (Cl. 46—41.)



1. In a game apparatus of the character described, a tiltable tray, a member arranged upon the tray and extending longitudinally thereof and forming with the sides of the tray trenches and having its top surface provided with a longitudinal groove, and inclined tracks arranged within the trenches and adapted to conduct a rolling member to the intake end of the groove.

2. In a game apparatus of the character described, a tiltable tray, a longitudinal member having a surface groove upon its top and arranged within the tray to form trenches with the sides thereof, an elevated transverse track arranged adjacent the intake end of the groove, and inclined tracks disposed within the trenches and leading to the transverse elevated track.

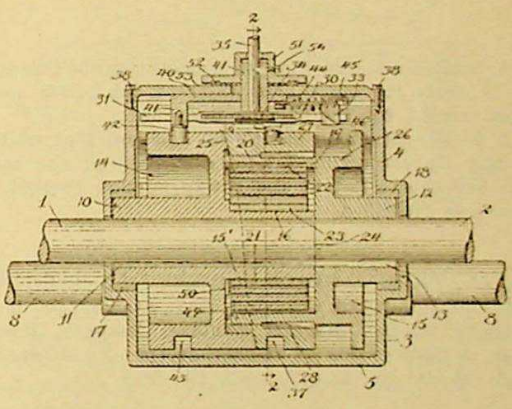
3. In a game apparatus of the character described; a tiltable tray; a longitudinal member mounted within the tray and forming therewith longitudinal trenches, said member being provided upon its top surface with a groove and upon its vertical edges with chambers; inclined tracks arranged within the trenches and adapted to conduct rolling members to the intake end of the groove; and a rolling member to travel upon the tracks.

4. In game apparatus of the character described; a tiltable tray; a longitudinal member mounted within the tray and forming therewith longitudinal trenches, said member being provided upon its top surface with a longitudinal groove having oppositely extending lateral groove extensions, and upon its upstanding edges with chambers; a transverse elevated track arranged at one end of the longitudinal groove; and inclined tracks extending within the trenches and leading to the ends of the transverse track.

5. In game apparatus of the character described, a table adapted to be held in the hand and longitudinally and laterally tilted and provided upon its upper surface with a longitudinal groove to receive balls and having lateral groove extensions to receive the balls upon the longitudinal groove so that the balls may be arranged in the proper order therein, and means for conducting a rolling element into the longitudinal groove upon the proper tilting of the table.

[Claims 6 to 10 not printed in the Gazette.]

1,204,292. TORSION-DYNAMOMETER. EDMUND B. MCCORMICK, Manhattan, Kans. Filed Dec. 18, 1915. Serial No. 67,633. (Dedicated to the public.) (Cl. 73—15.)



1. A torsion dynamometer comprising a divided shaft, a hub attached to one portion of said shaft, and a drum attached to the other portion of said shaft, a spring connecting said hub and drum, a cam surface provided upon the edge of said hub, a cam sleeve overlying said drum coacting with the cam upon said hub and means for indicating the longitudinal motion of said cam sleeve caused by the relative rotation of said hub and drum upon the yielding of said spring.

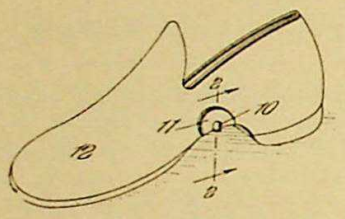
2. In a device of the class described, a casing, a cover for said casing provided with ways, a torsion dynamometer revolving in bearings in said casing, a rack and pinion indicating mechanism for indicating the power transmitted by said dynamometer, a bushing within which the shaft of said pinion is adapted to revolve, a sliding plate mounted in ways in the cover of said casing, studs upon said plate within which the rack is adapted to slide, means coacting with the said dynamometer to cause said sliding plate to follow endwise motion of said dynamometer in said casing whereby such endwise motion is prevented from giving false indications of said indicator.

3. In a torsion dynamometer adapted to be applied to a divided shaft, a hub to be applied to the driving portion of said shaft having a projecting portion and a projecting cam surface, a drum to be applied to the driven portion of the shaft overlying said projecting portion and lying within said cam projection, a spring connecting said hub and drum, a sliding cam sleeve carried upon the exterior of said drum and keyed thereto to revolve therewith, said cam sleeve coacting with said surface, springs pressing said cam sleeve against said cam surface, a peripheral channel in said cam sleeve, a longitudinally slidable rack carrying a roller projecting within said peripheral channel, and an indicator pinion coacting with said rack whereby longitudinal motion of the cam sleeve caused by relative

rotation of the hub and drum will be indicated by revolution of the indicator pinion.

4. In a torsion dynamometer the combination of a divided shaft, a hub member fixed to one portion of said shaft having a projecting portion, a hub fixed to the other portion of said shaft having a drum member overlying said projecting portion, a cam upon one of said members, means actuated by said cam upon relative motion between said members for indicating torque, a spring lying within said drum and attached to the projecting portion and to the interior of said drum so as to transmit the torque of said shaft, coacting stops upon said hub and drum to prevent excessive stress of said spring.

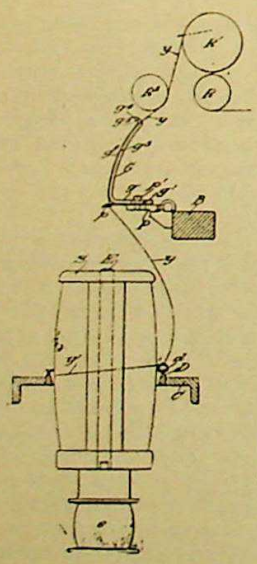
1,204,293. OVERSHOE. CHARLES WALTER MACWILLIAMS, Geneva, Nebr. Filed Mar. 28, 1916. Serial No. 87,261. (Cl. 36—5.)



1. A flexible overshoe having a protuberance extending laterally from its inner side adjacent the lower instep portion thereof, for the purpose described.

2. A flexible overshoe having its sole provided with an extending lip projecting laterally thereof at the inside of the overshoe adjacent the instep portion thereof, for the purpose described.

1,204,294. THREAD-GUIDE FOR TEXTILE-MACHINES. WILLIAM MARCROFT, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 23, 1915. Serial No. 16,417. (Cl. 19—26.)



1. An improved yarn- or thread-guide for use on spinning, twisting or like machines comprising a plate-like member bent longitudinally into arcuate shape and formed with a contracted groove extending the length of its face and adapted to receive a plurality of associated strands drawing therethrough to confine them in closely-adjacent parallel relation.

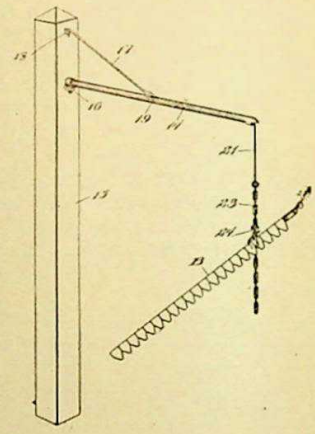
2. An improved yarn- or thread-guide for use on spinning, twisting or like machines comprising a longitudinally curved plate having a substantially flat face formed with a relatively narrow, shallow groove adapted to receive and confine a plurality of associated strands in parallel relation and means to secure said plate in position on the theard-board of the machine.

3. An improved yarn- or thread-guide comprising a foot-piece and a curved plate extending upwardly therefrom, with the convex face of said plate scored with a relatively narrow, shallow groove adapted to receive a plurality of associated strands drawing therethrough to straighten them out in close, parallel relation preparatory to twisting them into the finished yarn.

4. An improved yarn- or thread-guide comprising a slotted foot and a curved plate extending upwardly therefrom, with the convex surface of the plate scored with a contracted groove adapted to receive a plurality of untwisted strands drawing therethrough and one end of said groove provided with a funnel-like mouth for directing the strands into the groove.

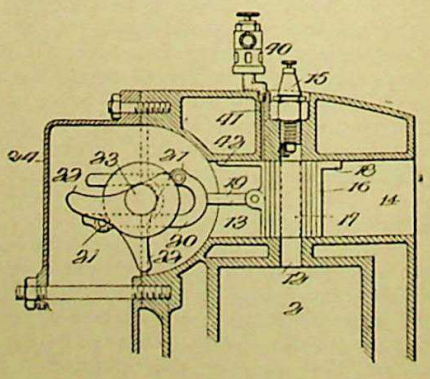
5. An improved yarn- or thread-guide comprising a base member formed with an upwardly-extending arcuate plate bent at its top to provide a right-angled bridge-piece, said bridge-piece formed with an open thread-eye and a relatively narrow, shallow groove extending from the eye longitudinally of the convex face of the plate to adapt it to receive a plurality of associated fibers drawing through the eye and across the plate.

1,204,295. SICKLE-BAR HOLDER. ALFRED MARTINSON, Rock Island, Ill. Filed Mar. 15, 1916. Serial No. 84,400. (Cl. 51—8.)



A holder of the class described comprising in combination with a fixed support, a hollow arm projecting horizontally therefrom and mounted for lateral swinging movement, a brace for said arm, a yieldable means arranged within the arm, a pulley arranged adjacent the forward end thereof, a flexible element connected with the yieldable means and suspended from said arm, passing over said pulley, and means for adjustably supporting the work from the flexible element.

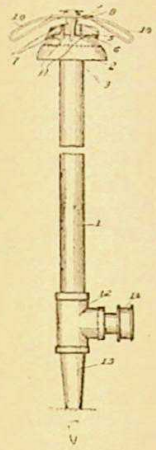
1,204,296. INTERNAL-COMBUSTION ENGINE. WILLIAM H. MAUPIN and DICE R. LOBDELL, Lemmon, S. D. Filed Feb. 11, 1915. Serial No. 7,514. (Cl. 123—75.)



In an internal combustion engine, the combination with a cylinder having a central port at its top, a sparker

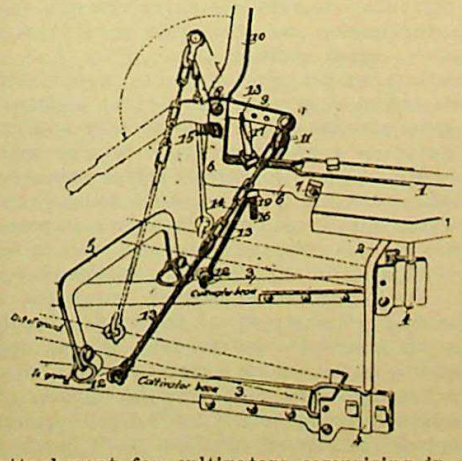
in vertical alinement with said port, a chamber above said cylinder and intermediate the latter and said sparker, a reciprocating piston movable in said chamber for controlling said port, said piston having a port designed to aline with said sparker and said cylinder-port, and a projection carried by said piston for covering said sparker when said cylinder is exhausting.

1,204,297. LAWN-SPRINKLER. JOSEPH JOHANSON MILLER, Duluth, Minn. Filed Oct. 12, 1914. Serial No. 866,405. (Cl. 137—57.)



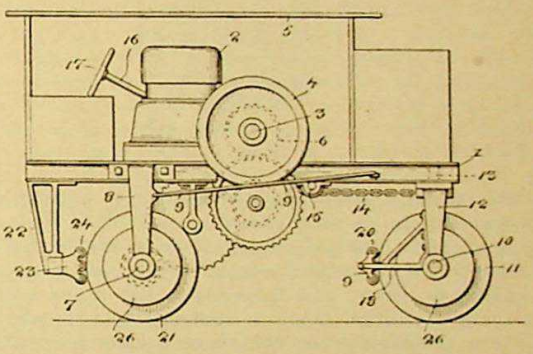
In a device of the class described, in combination, a tube, a hemi-spherical head formed thereupon and having a circumferentially disposed series of openings and between said openings and its center being formed with a series of obliquely disposed ports, an integral pin formed upon the periphery of said head, a collar surrounding said pin and resting upon said head and having an integral disk at right angles to said collar and revolving therewith, a turbine consisting of a plurality of blades each of which has a shank portion secured to said collar and another portion extending at an angle to said shank portion and curving around the surface of said head, the angular portion of each blade being provided with flanges forming a channel for guiding water therethrough over said head, said oblique opening adapted to discharge water directly against the angular part of each blade and between its flanges, a plurality of radially disposed arms carried by said disk and adapted to break the water issuing through said first named openings, and means for holding said disk against displacement from said pin, the blades of said turbine having their outer edges spaced inwardly from said first named series of openings.

1,204,298. ATTACHMENT FOR CULTIVATORS. JOSEPH C. MIRE, Dreyfus, La. Filed July 19, 1916. Serial No. 110,123. (Cl. 97—35.)



An attachment for cultivators comprising in combination with the frame and the beams hinged thereto to swing on vertical axes and connected intermediate their ends to constrain them to swing together, of an angle frame connected to the frame of the cultivator between and above the beams and having one of its portions vertical, an elbow lever pivoted to the said vertical portion, a flexible connection between one arm of the elbow lever and each beam for raising and lowering the beams when the lever is swung, and means on the angle frame for engagement by the connected arm of the lever to limit the downward movement thereof and adjustable with respect to the angle frame for varying the position of the beams, said elbow lever being mounted to swing the free end of the connected arm to opposite sides of the vertical portion of the angle frame to cause the weight of the beams to hold the lever in either position.

1,204,299. TRACTOR. JAMES N. MOODY, Waynesboro, Va. Filed Oct. 29, 1915. Serial No. 58,650. (Cl. 55—47.)



1. In a tractor or the like, a shaft, a roller for the shaft, said roller being hollow and centrally provided with a ring member, a member upon the shaft engaging with the ring member to cause the roller to rotate with the shaft and to permit of the roller tilting upon the shaft, and connecting means between said shaft and said ring member.

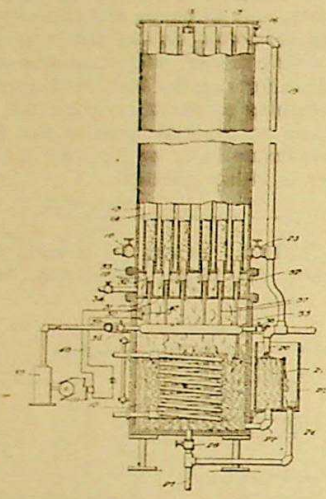
2. In a tractor or the like, a hollow roller having flanged ends, a shaft passing centrally through the roller, spring pressed members on the shaft closing the open ends of the roller, said roller having a central ring member, the inner periphery of which being concaved, said ring having angularly arranged slots which enter the inner periphery thereof, a member secured to the shaft, said member including a central portion having its periphery convexed to receive the concaved periphery of the ring, said member having fingers received in the slots of the ring, and spring means for retaining said member upon the ring.

3. In a tractor or the like, a hollow roller, a shaft passing centrally through the roller, a peripheral rounded member secured to the shaft disposed centrally in the roller, an element secured in the roller and receiving said member, and spring means for retaining said member in said element.

4. In a tractor or the like, a hollow roller, a shaft passing centrally through the roller, a peripherally rounded member secured to the shaft and disposed centrally in the roller, an element secured in the roller and receiving said member, spring means for retaining said member in said element, fabric partitions in the roller, and spring pressed means for closing the open ends of the roller.

5. In a tractor or the like, a hollow roller, a shaft passing through the roller, a member provided with laterally extending arms upon the shaft, a member having angular slots upon the roller and receiving the shaft member and arms thereof, spring means for retaining the members associated, fabric partitions in the roller, to the opposite sides of said member, spring pressed means for closing the ends of the roller, and revoluble members contacting with the rear face of the roller, as and for the purpose set forth.

1,204,300. TRIPLE PURIFICATION-STILL. DAVID PELTON MOORE, Washington, D. C., assignor, by direct and mesne assignments, of one-half to Jesse Spaulding Merrill, Washington, D. C., and one-half to George H. Draper, District of Columbia. Filed Feb. 17, 1916. Serial No. 78,927. (Cl. 203—5.)



1. A water still, including an evaporating chamber having vapor outlets, an air heater disposed within the evaporating chamber and having an air inlet and heated air outlets extending into the vapor outlets, a condenser having condenser tubes, and into which the vapor outlets extend, the air outlets being so arranged that the air and vapor are commingled in the vapor outlets and in the condenser tubes.

2. A water still, including an evaporator, a distilled water reservoir located thereabove, a condenser having a plurality of tubes located above the reservoir, said evaporator having vapor outlets extending through the reservoir projected into the lower ends of the condenser tubes, and an air heater located within the evaporator and having an outside air inlet and a plurality of air outlets, said outlets being of lesser diameter and projecting into and in communication with the vapor outlets, the upper ends of said air outlets terminating below the upper ends of the vapor outlets.

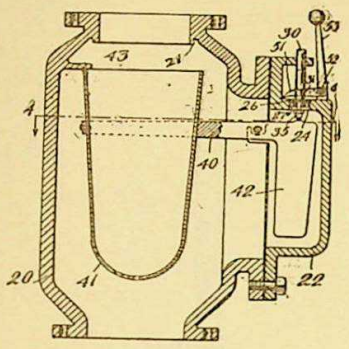
3. A water still, including an evaporator, a distilled water reservoir located thereabove, a condenser having a plurality of condenser tubes located above the reservoir, a plurality of vapor conduits of lesser diameter than said condenser tubes leading from the evaporator into the lower ends of the condenser tubes, an air heater located within the evaporator and having an air inlet, and a plurality of air outlet pipes of lesser diameter than the vapor conduits and leading from the heater and into the vapor conduits, the upper ends of said pipes terminating within the conduits.

4. A water still, including an evaporator, a distilled water reservoir located thereabove, a condenser having a plurality of condenser tubes open at their lower ends, and in communication with the reservoir, a plurality of vapor conduits one to each tube leading from the evaporator and projected into the lower ends of the tubes, and an air heater mounted within the evaporator and having an air inlet and plurality of air outlets one to, and projecting into, each vapor conduit, said air outlets terminating bodily with the vapor conduits whereby a successive commingling of the air with the vapor is attained within the vapor conduits and finally in the condenser tubes.

5. A water still, including an evaporator, a distilled water reservoir located thereabove, a condenser having a plurality of condenser tubes open at their lower ends and in communication with the reservoir, a plurality of vapor conduits of lesser diameter than and one to each tube leading from the evaporator and projected into the lower ends of the tubes, an air heater located within the evaporator, an air inlet leading from the atmosphere to the heater, and a plurality of air outlet pipes of lesser diameter than the vapor conduits and leading from the heater and projected in the vapor conduits.

[Claims 6 to 14 not printed in the Gazette.]

1,204,301. VACUUM-BREAKER. HARRY E. MORTON, Boston, Mass. Filed Mar. 6, 1913. Serial No. 752,288. (Cl. 261—2.)



1. A vacuum-breaker consisting of an enlarged pipe-section adapted to be arranged in upright position in the main exhaust steampipe between a jet-condenser and engine, a movable receptacle normally arranged in a predetermined elevated position therein, to permit free passage of the exhaust steam by it and to receive condensing-water which flows back from the jet-condenser, means associated with said receptacle for holding it in its elevated position and against vibration, which permits downward movement thereof when overcome by the weight of the condensing-water, a non-return air inlet valve arranged for operation by the downwardly moving receptacle, said receptacle having a leak-opening permitting escape of the condensing-water and the return of the receptacle to normal position independently of the valve, whereby the valve remains open.

2. A vacuum-breaker consisting of an enlarged pipe-section adapted to be arranged in upright position in the main exhaust steam-pipe between a jet-condenser and engine, a movable receptacle normally arranged in a predetermined elevated position therein, to receive condensing-water which flows back from the jet-condenser through said pipe, said pipe-section being of much larger diameter than the receptacle to permit free passage of the exhaust steam by it, means associated with said receptacle for holding it in its elevated position and against vibration, which permits downward movement thereof when overcome by the weight of the condensing-water, a non-return air inlet-valve arranged for operation by the downwardly moving receptacle, said receptacle having a leak-opening permitting escape of the condensing-water and the return of the receptacle to normal position independently of the valve, whereby the valve remains open, and hand-engaging means associated with said valve for returning it to closed position.

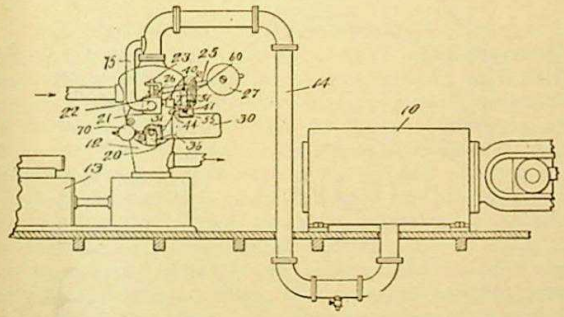
3. A vacuum-breaker consisting of an enlarged pipe-section adapted to be arranged in upright position in the exhaust steam pipe between a jet-condenser and engine, a movable receptacle normally arranged in a predetermined elevated position therein to provide a free passage for the exhaust steam by it and to receive condensing-water which flows back from the jet-condenser through said pipe, means associated with said receptacle and arranged in said section for holding it in its elevated position and against vibration, which permits downward movement thereof when overcome by the weight of the condensing-water, a non-return air inlet-valve independent of said receptacle and its holding-means, which is arranged for engagement with said holding-means for operation upon downward movement of the receptacle and for independent return of said receptacle to normal position and hand-engaging means associated with said valve for returning it to closed position independently of the receptacle.

4. A vacuum-breaker consisting of an enlarged pipe-section adapted to be arranged in upright position in the exhaust steam pipe between a jet-condenser and engine, having an opening in its side, and a removable recessed wall arranged over said opening, a pivoted counter-balanced receptacle arranged in said section to permit a free passage of the exhaust steam by it and to receive condensing-water which flows back from the jet-condenser, the counterweight being extended into the recess of said wall, and an air inlet-valve arranged on said wall above said counterweight, to be engaged thereby upon a downward movement of the receptacle.

5. A vacuum-breaker consisting of an enlarged pipe-section adapted to be arranged in upright position in the exhaust steam pipe between a jet-condenser and engine, having an opening in its side and a removable recessed wall arranged over said opening, a pivoted counter-balanced receptacle arranged in said section to permit a free passage of the exhaust steam by it and to receive condensing-water which flows back from the jet-condenser, the counterweight being extended into a recess of said wall, the side opening being of sufficient area to admit of the passage through it of the receptacle, an air inlet-valve arranged on said wall above said counterweight, to be engaged thereby upon a downward movement of the receptacle.

[Claim 6 not printed in the Gazette.]

1,204,302. VACUUM-BREAKER. HARRY E. MORTON, Boston, Mass. Filed Oct. 22, 1913, Serial No. 796,721. Renewed Jan. 21, 1916. Serial No. 73,500. (Cl. 261—2.)



1. The combination with a jet-condenser, of a vacuum-breaker having an air inlet-valve arranged to open the vacuum-space to the atmosphere thereby to destroy the vacuum, a movable receptacle arranged at the outside of the condenser which is closed to the atmosphere and is in open communication with the vacuum-space, to receive condensing-water which rises in the condenser, and by its weight causes the receptacle to move downward, and means controlled by said receptacle, upon a downward movement thereof, to operate said air inlet-valve to open the vacuum-space, substantially as described.

2. The combination with a jet-condenser, of a vacuum-breaker having an air inlet-valve arranged to open the vacuum-space to the atmosphere thereby to destroy the vacuum, a hollow, pivotally supported receptacle arranged at the outside of the condenser which is closed to the atmosphere and is in open communication with the vacuum-space, to receive condensing-water which rises in the condenser, the weight of which moves said receptacle downward, and means controlled by said receptacle upon a downward movement thereof to operate said air inlet-valve to open the vacuum-space, substantially as described.

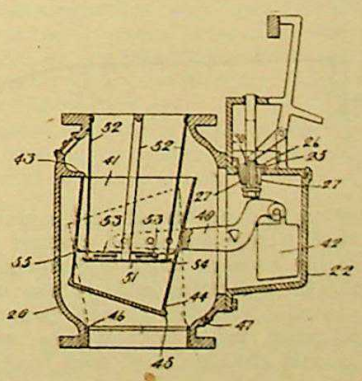
3. The combination with a jet-condenser, of a vacuum-breaker having an air inlet-valve arranged to open the vacuum-space to the atmosphere and thereby destroy the vacuum, a weighted actuating-lever for said valve, tripping-mechanism controlling the movement of said actuating-lever, and a receptacle with which said tripping-mechanism is associated, which is arranged at the outside of the condenser and is closed to the atmosphere and is in open communication with the vacuum-space, to receive condensing-water which rises in the condenser and by its weight causes the receptacle to move downward to control the operation of said tripping-mechanism, substantially as described.

4. The combination with a jet-condenser, of a vacuum-breaker having an air inlet-valve arranged to open the vacuum-space to the atmosphere thereby to destroy the vacuum, a hollow receptacle rotatably connected with the condenser oposite the vacuum-space thereof which is in open communication with the interior of the condenser and is closed to the atmosphere and is adapted to receive condensing-water which rises in the condenser, means to hold said receptacle in elevated position, arranged for operation by the weight of the condensing-water which enters the receptacle, permitting said receptacle to swing downward, and means controlled by and upon a downward swinging motion of the receptacle to operate the air inlet-valve to open the vacuum-space, substantially as described.

5. The combination with a jet-condenser, of a vacuum-breaker having an air inlet-valve arranged to open the vacuum-space to the atmosphere thereby to destroy the vacuum, actuating-means for said valve, tripping-mechanism for said actuating-means, a hollow receptacle rotatably connected with the condenser opposite the vacuum-space thereof, which is in open communication with the interior of the condenser and is closed to the atmosphere and is adapted to receive condensing-water which rises in the condenser, means to hold said receptacle in elevated position arranged for operation by the weight of the condensing-water which enters the receptacle, permitting said receptacle to swing downward, and means controlled by and upon a downward swinging movement of the receptacle to disengage the tripping-mechanism and permit operation of the actuating-means for the air inlet-valve, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,204,303. COMBINED VACUUM-BREAKER AND NON-RETURN VALVE. HARRY E. MORTON, Boston, Mass. Filed May 3, 1915. Serial No. 25,424. (Cl. 261—2.)



1. A combined vacuum-breaker and non-return valve consisting of an inlet-valve arranged to open the exhaust steam passage to the atmosphere between an engine and jet-condenser, a closing-valve for said passage, and means controlled by the condensing-water which flows back from the jet-condenser for operating both valves to destroy the vacuum, and to check the progress of the condensing-water through the exhaust steam passage.

2. A combined vacuum-breaker and non-return valve consisting of an inlet-valve arranged to open the exhaust steam passage to the atmosphere between an engine and a jet-condenser, a closing-valve for said passage, and means operated by the weight of the condensing-water which flows back from the jet-condenser for controlling said valves respectively, to open the passage to destroy the vacuum and to close said passage to check the progress of condensing-water therethrough.

3. A combined vacuum-breaker and non-return valve consisting of an inlet-valve arranged to open the exhaust steam passage to the atmosphere between an engine and

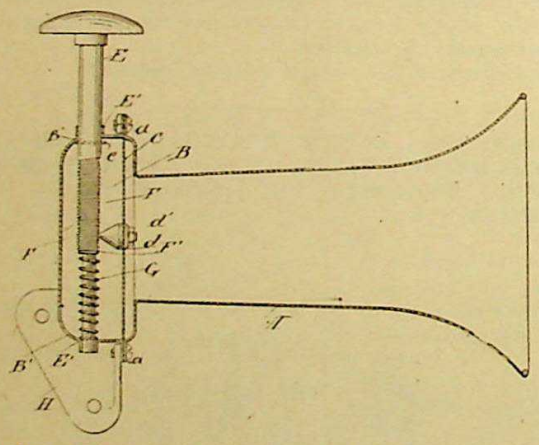
a jet-condenser, a valve to close said passage between said inlet-valve and the engine, and means operated by the weight of the condensing-water which flows back from the jet-condenser for controlling said valves, thereby to open the passage to break the vacuum and to close the passage beyond the opening thus made.

4. A combined vacuum-breaker and non-return valve consisting of an inlet-valve arranged to open the exhaust passage to the atmosphere between an engine and a jet-condenser, a valve to close said passage and an actuating-device for said valves comprising a receptacle to receive the condensing-water which flows back from the jet-condenser, thereby to operate said valves, respectively, to open the passage to destroy the vacuum and to close the passage beyond said opening to check the progress of the condensing-water therethrough.

5. A combined vacuum-breaker and non-return valve consisting of an inlet-valve arranged to open the exhaust steam passage to the atmosphere between an engine and a jet-condenser, a valve to close said passage and a pivoted counter-balanced device for said valves including a receptacle to receive the condensing-water which flows back from the jet-condenser, thereby to operate said valves to open the passage to destroy the vacuum and to close the passage beyond said opening and check the progress of the condensing-water therethrough.

[Claims 6 to 18 not printed in the Gazette.]

1,204,304. MECHANICAL HORN. FREDELLIA H. MOYER, Euclid Heights village, Ohio. Filed Feb. 5, 1915. Serial No. 6,231. (Cl. 116—1.)

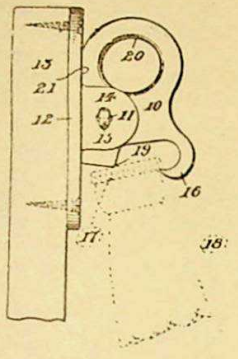


1. In combination, in a mechanical horn, a trumpet having a flanged base, a resonant sound chamber having a front opening to the walls of which said trumpet base is secured, a diaphragm separating said chamber and trumpet, an anvil centrally attached to said diaphragm and having a central point, and a movable stem reciprocable and rotatable in said chamber, said stem having a continuous screw thread upon its periphery in constant engagement with said central point on said anvil.

2. In a device of the character described, a horn, a chamber secured to one end of the horn, a diaphragm located between the chamber and the horn, a detent carried by and projecting through the diaphragm, a manually operable rod circular in cross-section formed with a screw-thread adapted to impinge upon the detent, whereby the diaphragm may be vibrated, a spring to return the rod to its initial position following the manual operation, and means for limiting the return movement of the rod.

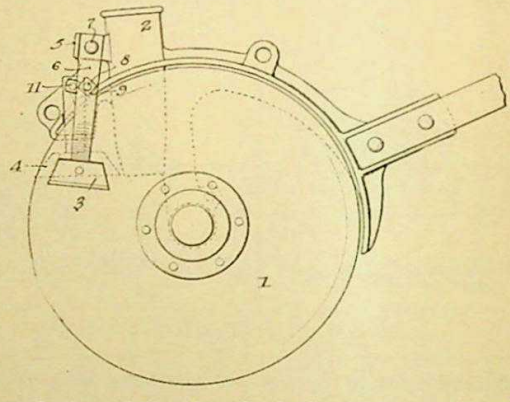
1,204,305. BOTTLE-OPENING DEVICE. MICHAEL NAGY, Cincinnati, Ohio. Filed Feb. 24, 1916. Serial No. 80,215. (Cl. 65—46.)

A bottle cap remover comprising a plate provided at one end with a cap engaging claw and a heel against which a bottle cap is fulcrumed, the said claw extending slightly beyond the heel, the plate having a finger opening enabling the use of the plate when held in the hand, and having an opening to receive a pivot pin for mounting the plate on a support, the plate having a straight edge spaced rearwardly of the finger opening to engage the sup-



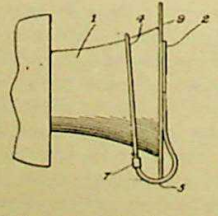
port and hold the plate in rigid relation thereto, the relative position of the claw and heel causing a bottle to assume an upright position during the operation of removing a cap.

1,204,306. SUPPORTING MECHANISM FOR SCRAPING-BLADES. JOSEPH P. OFFERMAN, Beaver Dam, Wis., assignor to Beaver Dam Manufacturing Co., Beaver Dam, Wis., a Corporation of Wisconsin. Filed Feb. 3, 1916. Serial No. 75,943. (Cl. 97—79.)



In a device of the described class, the combination of two converging disks, a support located between said disks, lugs projecting laterally from the side of said support a resilient member connected with each side of each of said lugs, a scraping blade connected with the free end of each of said resilient members, and a bolt adjustably connecting each pair of said resilient members, whereby as the nuts on said bolts are turned forwardly or backwardly said scraping blades are caused to bear with greater or less pressure against said disks.

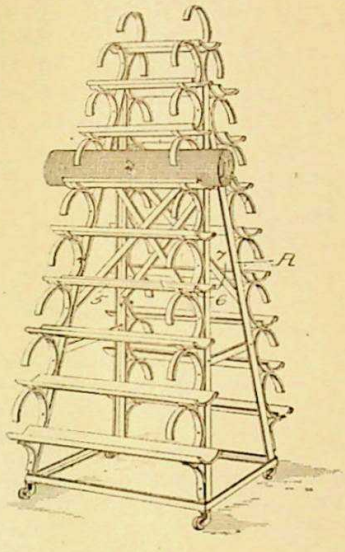
1,204,307. SANITARY ATTACHMENT FOR MOUTH-PIECES. HENRY BIGHAM PARK, Lagrange, Ga. Filed Nov. 6, 1915. Serial No. 60,064. (Cl. 179—185.)



A sanitary guard for mouth pieces comprising a single length of wire bent upon itself between its ends to encircle the mouth piece and having the end portions thereof projecting outwardly and then bent backwardly contiguous to the outer edge of the mouth piece, a sanitary pad disposed between the outer end of the mouth piece

and said backwardly bent portion and resting upon said outwardly projecting portion, and a clamp carried by the outwardly projecting portion of said holder and interconnecting the same to secure the circular bent portion of the guard to the mouth piece.

1,204,308. WIRE-HOLDING STAND. JOHN W. PETER, Fostoria, Ohio. Filed Nov. 19, 1915. Serial No. 62,307. (Cl. 211—18.)

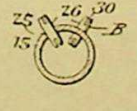


1. The combination with a wire stand including a plurality of pairs of spaced split rings, of a plurality of transversely curved pans arranged one upon each pair of rings and having its forward and rear edges overturned, the forward overturned edge of the pan engaging upon the lower free ring ends, and bolts arranged in spaced openings in the rear overturned edge and adapted to be extended through openings provided in the rings, said bolts having their heads housed between the body of the pan and the rear overturned edge thereof.

2. In a wire holding stand, the combination with a plurality of split spaced rings, of a wire roll receiving device mounted on the rings including a surface having a forward portion curving over and housing the lower free ends of the rings, said wire roll receiving device having an underturned rear portion, and means carried by the under-turned rear portion and projected from the wire roll receiving surface for connecting the wire roll receiving device to the rings.

3. The combination in a wire stand with a pair of split spaced rings, of a pan having its forward edge overturned whereby to house the lower free ends of the rings, said pan having its rear edge overturned downwardly and provided with means for attaching the pan to the rings.

1,204,309. IRRIGATING DEVICE. JOHN PETERSON, Saratoga Springs, N. Y. Filed Feb. 20, 1915. Serial No. 9,672. (Cl. 137—65.)



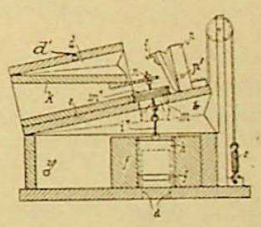
1. A combined sprinkler nozzle and strainer consisting of a cylindrical body having a longitudinal bore and provided at its intake end with a terminal slit producing spaced lugs, said lugs being bent toward each other to produce an intake opening of less width than the diameter of the bore from which obstructions will thus be excluded.

2. The combination with an irrigating pipe having an aperture in the wall thereof, of a sprinkler nozzle consisting of a cylindrical body having a longitudinal bore and provided at its intake end with a terminal slit producing spaced lugs which are bent toward each other producing an external beveled portion which may be frictionally engaged in the aperture and producing also an intake opening of a width less than that of the longitudinal bore from which obstructions will thus be excluded.

3. A combined strainer and sprinkler nozzle consisting of a cylindrical body having a longitudinal bore and provided at each end with a terminal slit producing spaced lugs which are bent toward each other to form intake and exit openings of less width than the diameter of the bore.

4. The combination with an irrigating pipe, the wall of which is provided with a cylindrical aperture, of a strainer nozzle consisting of a cylindrical body having a longitudinal bore and provided at its intake end with a terminal slit producing spaced lugs which are bent toward each other to produce an external beveled portion for frictional engagement in the aperture.

1,204,310. PNEUMATICALLY VARIABLE TENSION-REGULATORS FOR MUSICAL INSTRUMENTS. AUGUST PHILIPPS and OSWALD PHILIPPS, Frankfort-on-the-Main, Germany. Filed July 26, 1909, Serial No. 509,744. Renewed Apr. 19, 1916. Serial No. 92,315. (Cl. 230—36.)



1. A valve-controlled air-way and a governing bellows mounted thereon, in combination with an adjusting bellows mounted on said governing bellows, an auxiliary bellows which has pneumatic connection with said governing bellows and is carried by the movable member of the latter, and mechanical connections between the auxiliary bellows and the valve of said air-way, also between the auxiliary bellows and the movable member of said adjusting bellows, the inflation of said auxiliary bellows being governed by the position of said valve and the consequent greater or less closure of said air-way.

2. A valve-controlled air-way and a governing bellows mounted thereon, in combination with an adjusting bellows mounted on said governing bellows, a stop limiting the movement of the latter, an auxiliary bellows which has pneumatic connection with said governing bellows and is carried by the movable member of the latter, and mechanical connections between the auxiliary bellows and the valve of said air-way, also between the auxiliary bellows and the movable member of said adjusting bellows, the inflation of said auxiliary bellows being governed by the position of said valve and the consequent greater or less closure of said air-way.

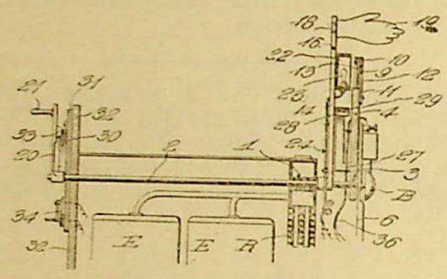
3. A valve-controlled air-way and a governing bellows pneumatically connected therewith, in combination with an adjusting bellows, an auxiliary bellows which has pneumatic connection with said governing bellows and is arranged to move therewith, and means connecting said auxiliary bellows to said valve and to said adjusting bellows whereby either the governing bellows or adjusting bellows may actuate the valve of said air-way or both of them may actuate it in coöperation.

4. A valve controlled air-way and a governing bellows pneumatically connected therewith, in combination with an adjusting bellows mounted on said governing bellows and connections between the valve of said air-way and the said adjusting bellows comprising means of extending and contracting such connections, the said means being governed by the movement of said valve, the said devices being arranged and adapted to permit the actuation of said valve by either of said bellows or by both of them acting in coöperation.

5. A valve-controlled air-way and a governing bellows mounted thereon, in combination with an adjusting bellows mounted on said governing bellows, a bellows carrying a stop for limiting the movement of said governing bellows, this stop-carrying bellows having pneumatic connection with said adjusting bellows, and extensible and contractible means connecting the valve of said air-way with said adjusting bellows, the extension and contraction of said means being controlled by the movement of the governing bellows.

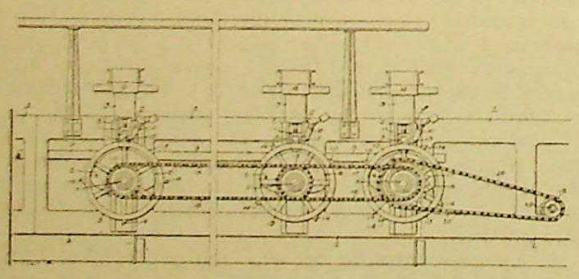
[Claim 6 not printed in the Gazete.]

1,204,311. SIGNAL DEVICE. ANTHONY L. W. PLUGGE, Grand Rapids, Mich. Filed Sept. 23, 1915. Serial No. 52,239. (Cl. 116—31.)



In a device of the class described, a plate to be secured on a vehicle, an operating shaft extending therefrom, an arcuate bar, laterally extending attaching feet formed on the opposite ends of said bar and secured to said plate, said bar being spaced from said plate, an arm fixed to said shaft, a finger carried by the arm for engagement with said bar, an outwardly extending end on said finger disposed between said bar and the face of said plate, said end being adapted to engage said attaching feet to limit the movement of the arm in either direction, and an indicator carried by said arm.

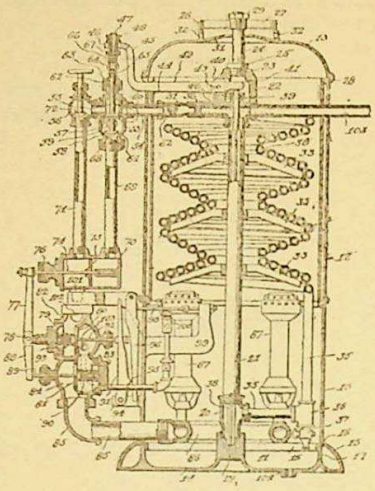
1,204,312. BLOCK-PRINTING MACHINE. GEORGE PRIFOLD, Linwood, Pa., assignor, by mesne assignments, to United Roofing & Manufacturing Company (Department of Barrett Manufacturing Company), Wilmington, Del., a Corporation of Delaware. Filed Nov. 17, 1915. Serial No. 62,007. (Cl. 101—88.)



1. The combination in a block printing machine, of a frame; a series of block carriers thereon; means for reciprocating the block carriers; a latch for each carrier to hold it out of action; a wheel mounted at each carrier for actuating the latch, said wheel having a pin arranged to engage the latch and to move it out of engagement with the carrier; and means for driving the several wheels.

2. The combination in a block printing machine, of a frame; a series of printing block carriers; a cam shaft and cams for each carrier; a sprocket wheel and connected pin wheel loose on each shaft, one or more pins on the wheels; a latch for holding each carrier out of action, said latch being in the path of one of the pin wheels which is arranged to move the latch away from the carrier; and chains for driving the several sprocket wheels and pin wheels in unison.

1,204,313. AUTOMATIC WATER-HEATER. THEODORE J. RADKE, Oak Park, Ill. Filed June 19, 1915. Serial No. 35,057. (Cl. 126—351.)



1. In a heater of the character described, a water receptacle, a cold water inlet, two branch supply pipes leading from said inlet to supply water to said receptacle, a motor connected in one of said branch supply pipes for operating a gas valve to open position, means for alternately opening said branch supply pipes to said inlet to cause the water to flow solely through one branch pipe at one time to operate said motor to open said gas valve and at another time solely through the other branch pipe free from said motor to allow the gas valve to close.

2. In a heater of the character described, a water receptacle, a cold water inlet embodying a casing provided with two outlets, a branch supply pipe leading from each outlet to supply water to said receptacle, a motor connected in one of said branch supply pipes for operating a gas valve to open position, and a thermostatically operated means for alternately opening said branch supply pipes to said inlet to cause the water to flow solely through one branch pipe at one time to operate said motor to open said gas valve and at another time solely through the other branch pipe free from said motor to allow the gas valve to close.

3. In a heater of the character described, a water receptacle, a cold water inlet embodying a casing provided with two outlets located in alinement with each other, a branch supply pipe leading from each outlet of the casing to supply water to said receptacle, a motor connected in one of said branch supply pipes for operating a gas valve to open position, and a thermostatically operated means for alternately opening said branch supply pipes to said inlet to cause the water to flow solely through one branch pipe at one time to operate said motor to open said gas valve and at another time solely through the other branch pipe free from said motor to allow the gas valve to close.

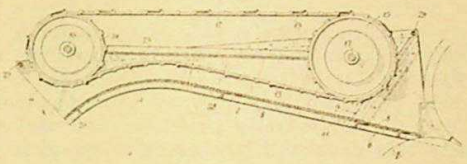
4. In a heater of the character described, a water receptacle, a cold water inlet, a valve-casing provided with two outlets located in alinement with each other, said inlet being connected to said casing between the two outlets, a branch supply pipe leading from each outlet to supply water to said receptacle, a motor connected in one of said branch supply pipes for operating a gas valve to open position, and a thermostatically operated means for alternately opening said branch supply pipes to said inlet to cause the water to flow solely through one branch pipe at one time to operate said motor to open said gas valve and at another time solely through the other branch pipe free from said motor to allow the gas valve to close.

5. In a heater of the character described, a water receptacle, a cold water inlet embodying a casing provided with two outlets in alinement with each other, a branch supply pipe leading from each outlet to supply water to said receptacle, a motor connected in one of said branch

supply pipes for operating a gas valve to open position, a double valve in said casing, and a thermostatically operated means for operating said double valve to alternately open said branch supply pipes to said inlet to cause the water to flow solely through one branch pipe at one time to operate said motor to open said gas valve and at another time solely through the other branch pipe free from said motor to allow the gas valve to close.

[Claims 6 to 10 not printed in the Gazette.]

1,204,314. MEANS FOR CONVEYING MACERATED BAGASSE BETWEEN SUGAR-MILLS. WILLIAM ARTHUR RAMSAY, Honolulu, Hawaii. Filed Feb. 25, 1915. Serial No. 10,623. (Cl. 100—47.)



1. The combination of a chute to extend between successive sugar mills and along which the bagasse is fed and a macerating scraper adjacent the inlet end of the chute, the chute being removable from between the scraper and the next succeeding mill by a lifting movement.

2. The combination of a chute to extend between successive sugar mills and along which the bagasse is fed, a macerating scraper adjacent the inlet end of the chute provided with side plates, and brackets adjacent the discharge end of the chute, said plates and brackets engaging the side walls of the chute to support the latter and being formed to permit of the removal of the chute by a lifting movement thereof.

3. The combination of a chute to extend between successive sugar mills and along which the bagasse is fed, a macerating scraper adjacent the inlet end of the chute provided with side plates, and brackets adjacent the discharge end of the chute, said plates and brackets engaging the side walls of the chute to support the latter, the meeting edges of the side walls of the chute and of said plates and brackets, respectively, being formed along converging lines of inclination whereby the chute may be removed from position by a lifting movement.

4. The combination of a chute to extend between successive sugar mills and along which the bagasse is fed, a macerating scraper adjacent the inlet end of the chute provided with side plates, and brackets adjacent the discharge end of the chute, said plates and brackets engaging the side walls of the chute to support the latter and being formed to permit of the removal of the chute by a lifting movement thereof, the brackets being co-planar with the side walls of the chute and forming continuations thereof and being connected by a transverse plate which forms a continuation of the bottom of the chute.

5. The combination of a chute to extend between successive sugar mills and along which the bagasse is fed, a macerating scraper adjacent the inlet end of the chute provided with side plates, and brackets adjacent the discharge end of the chute, said plates and brackets engaging the side walls of the chute to support the latter and being formed to permit of the removal of the chute by a lifting movement thereof, the brackets being co-planar with the side walls of the chute and forming continuations thereof and being connected by a transverse plate which forms a continuation of the bottom of the chute, the meeting edges of the side walls of the chute and of said brackets and of the bottom of the chute and said transverse plate being formed to provide lap joints.

[Claims 6 to 14 not printed in the Gazette.]

1,204,315. PROCESS OF MAKING PRACTICALLY ALCOHOL-FREE BEERS. CASPAR REITER, Bayrischzell-Hochkreut, Germany. Filed Apr. 6, 1914. Serial No. 830,037. (Cl. 99—11.)

1. A process of making beer containing but small quantities of alcohol, which consists in acidulating the wort, hopping the acidulated wort, then adding yeast to produce alcoholic fermentation, and checking the fermentation at such a stage as to leave but a small quantity of alcohol in the beer.

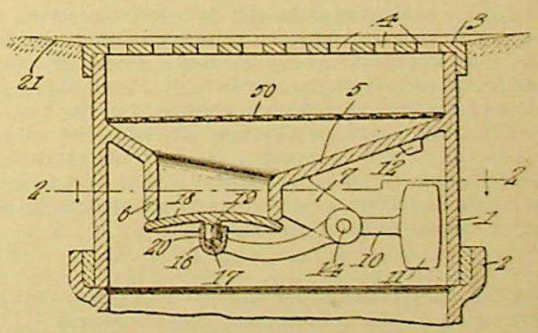
2. A process of making beer containing but small quantities of alcohol, which consists in acidulating the wort by treatment with acid-forming bacteria, hopping the acidulated wort, then adding yeast to produce alcoholic fermentation, and checking the fermentation at such a stage as to leave but a small quantity of alcohol in the beer.

3. A process of making beer containing but small quantities of alcohol, which consists in introducing acid-forming bacteria into the wort, permitting the bacterial action to continue until the wort is acidulated, then hopping the wort to stop the basterial action, adding yeast to produce alcoholic fermentation, and checking the fermentation at such a stage as to leave but a small quantity of alcohol in the beer.

4. A process of making beer containing but small quantities of alcohol, which consists in introducing acid-forming bacteria and substances adapted to facilitate their action into the wort, permitting the bacterial action to continue until the wort is acidulated, then hopping the wort to stop the bacterial action, adding yeast to produce alcoholic fermentation, and checking the fermentation at such a stage as to leave but a small quantity of alcohol in the beer.

5. A process of making beer containing but small quantities of alcohol, which consists in acidulating the wort, hopping the acidulated wort, then adding yeast to produce alcoholic fermentation, and checking the fermentation at such a stage as to leave but a small quantity of alcohol in the beer by pasteurizing the beer, filtering and bottling the beer and again pasteurizing.

1,204,316. STOP-VALVE. WILLIAM RENNER, Columbus, Ohio, assignor of one-half to John H. Davis, Columbus, Ohio. Filed Apr. 5, 1916. Serial No. 89,167. (Cl. 182—14.)

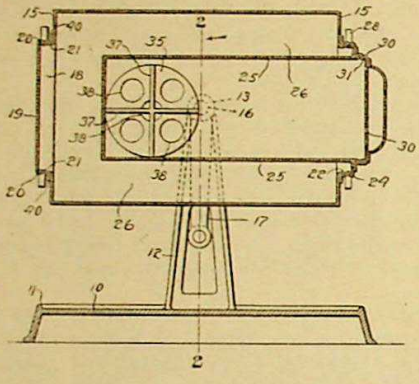


1. In a device of the class described, a casing including a hopper having an opening; an arm projecting from the hopper and provided with a journaling aperture having a lateral extension; a lever counter-weighted at its other end and provided intermediate its ends with a shaft mounted to rock in the aperture of the arm, the shaft having a lug adapted to pass through the extension of the aperture, the lug bearing against one side of the arm, out of alinement with the extension; and a valve carried by the inner end of the lever and controlling the opening, the valve bearing against the hopper to prevent the lug from coming into alinement with the extension when the shaft is rocked, the valve being detachable from the lever to permit a sufficient tilting of the lever to aline the lug with the extension.

2. In a device of the class described, a casing including a hopper having an opening; an arm projecting from the hopper; a lever fulcrumed intermediate its ends on the arm and provided at its outer end with a counter-weight, the lever being provided upon its inner end with a socket; and a valve controlling the opening, the valve including a stem loosely received in the socket to rock therein, whereby the valve may be permitted to coöperate with the opening.

3. In a device of the class described, a casing including a hopper having an opening; a lever located within the casing; a fulcrum for the lever; a weight on the outer end of the lever; a socket on the inner end of the lever and provided in its bottom with an upstanding boss; and a valve controlling the opening, the valve including a stem received in the socket, the lower end of the stem being provided with a recess in which the boss is loosely received, the stem being mounted to swing upon the boss, within the contour of the socket.

1,204,317. APPARATUS FOR FREEZING LIQUIDS. HENRY P. ROBERTS, Roxbury, Mass. Filed Dec. 8, 1914. Serial No. 876,082. (Cl. 257—75.)

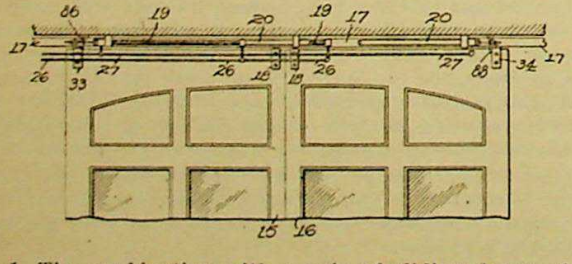


1. In an apparatus of the character described, in combination, a closed receptacle, means to move said receptacle, and a plunger comprising a plurality of rib members within a spherical boundary in said receptacle operated by the movement of the receptacle and detached therefrom.

2. In an apparatus of the character described, in combination, a receptacle, mechanism for agitating said receptacle, a plunger comprising a plurality of intersecting ribs within said receptacle and detached therefrom, said plunger being operated by the agitation of said receptacle.

3. In an apparatus of the character described, in combination, a receptacle, a container inclosing said receptacle and forming therewith a chamber for the reception of a freezing agent, mechanism for agitating said receptacle and said container, a detached foraminous plunger having scraping ribs within a spherical boundary and rotatable within said receptacle adapted to be operated by the agitation of said receptacle.

1,204,318. AUTOMATIC DOOR-OPERATING DEVICE. SYLVANUS B. ROY, Worcester, Mass.; Serena L. Roy, administratrix of said Sylvanus B. Roy, deceased, assignor to B. S. Roy & Son Company, a Corporation of Massachusetts. Filed July 19, 1915. Serial No. 40,562. (Cl. 268—8.)



1. The combination with a pair of sliding doors, of a pair of parallel hydraulic cylinders, each having a piston connected with one of the doors, means for simultaneously causing said pistons to move in opposite directions to close or open both doors, and means whereby if one door opens or closes before the other said first-mentioned means cannot be operated to change the direction of motion of either piston until the second door comes to its fully open or closed position.

2. The combination with a door and a cylinder and piston for operating it, of electrical connections for controlling the operation of the piston comprising a switch, yielding means for normally holding the switch closed, a lever independent of the door connected with the switch for opening it, and means on the door for operating said lever to tend to open the switch when the door comes to its open position.

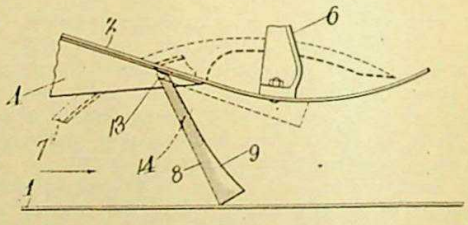
3. The combination with a door and a cylinder and piston for operating it, of electrical connections for controlling the operation of the piston comprising a switch, yielding means for normally holding the switch closed, a lever independent of the door connected with the switch for opening it, and means on the door for operating said lever to tend to open the switch when the door comes to its closed position.

4. The combination with a pair of doors, of a piston and cylinder for each door for operating the same, a door switch, means operated by the two doors for positively opening said door switch only when the two doors are both in one of their extreme positions, and means connected with said door switch whereby when it is closed the cylinders can be connected with a source of fluid pressure for operating the doors from said extreme position.

5. The combination with two doors and means for operating them, of a switch for controlling the opening of the doors, a switch for controlling the closing of the doors, and means whereby the opening switch is operated to be opened only when both doors are fully open, and the closing switch is operated to be opened only when both doors are fully closed.

[Claims 6 to 14 not printed in the Gazette.]

1,204,319. ATTACHMENT FOR GRAIN-BINDERS. EARL E. SAYLOR, Campbell, Nebr. Filed Jan. 2, 1915. Serial No. 162. (Cl. 56—126.)

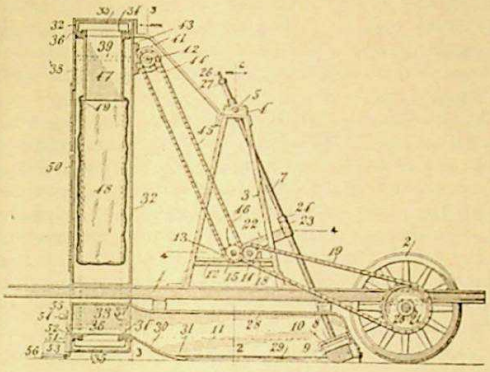


1. The combination in a grain binder, of a deck, a breast plate opposite the same provided with a slot and an opening at one end of the slot, of a plate pivotally attached to the breast plate and adapted to extend downwardly therefrom across the space between the breast plate and the deck and to be swung upwardly and forwardly until it covers the said opening in the breast plate, and means for arresting the upward swinging movement of said pivoted plate to prevent it from closing the said opening to the passage down through the same of an object from a point above the breast plate.

2. The combination in a grain binder provided with a deck, a breast plate above the deck provided with a slot and an opening at one end of the slot, and a guard plate pivotally attached to the breast plate at the rear end of the said opening and provided with upwardly projecting side walls; said side walls being adapted to strike against the under side of the breast plate at opposite sides of said opening to cover said opening from below without interfering with the passage through said opening of an object from a point above the breast plate.

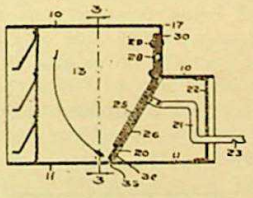
3. The combination in a grain binder of a deck, a breast plate above the deck provided with a slot, an opening forward of the slot and walls depending at opposite sides of the slot, and a guard plate pivotally attached to the breast plate and adapted to swing from a position underlying said opening to a position rearward of said opening and provided with upwardly projecting side walls to arrest the upward movement of said pivoted plate by contact with the breast plate and with a slot to receive the walls depending from the breast plate.

1,204,320. STREET-SWEEPING MACHINE. JACOB A. SCHROEDER, Piqua, Ohio, assignor to Mary Schroeder, Piqua, Ohio. Filed Jan. 31, 1916. Serial No. 75,221. (Cl. 15—17.)



A machine of the character specified, comprising a frame supported on wheels, an upright casing mounted upon and extending below said frame, a horizontal casing mounted on said frame and therebelow said horizontal casing having its lower side open and a portion of said lower side extended upwardly and joining the lower portion of said upright casing below the frame, a brush in said horizontal casing, means for imparting a lower forward or sweeping movement to said brush and an upper rearward or non-sweeping movement thereto within said horizontal casing, said means comprising the rods 7 connected to said brush and driven from shaft 15 provided with cranks 22 and sleeves 23 connected with said cranks 22 and movable on said rods 7.

1,204,321. WALL-VENTILATING DUCT. CLARENCE C. SHIPP, Indianapolis, Ind. Filed Mar. 1, 1916. Serial No. 81,421. (Cl. 98—27.)



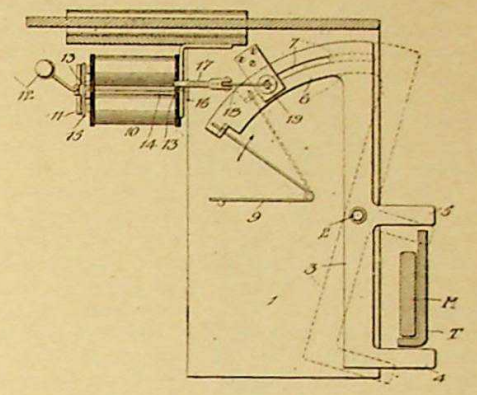
1. A wall ventilating duct, square in cross section, having an inturned valve-seat formed by bending the metal of the duct inwardly and thence outwardly, and a damper valve hinged in said duct, said damper valve being composed of pliable material adapted to rest upon said valve-seat and close the opening through said duct.

2. A wall ventilating duct, square in cross section, having an inturned valve-seat formed by bending the metal of the duct inwardly and thence outwardly, a damper valve hinged to said duct, said damper valve being composed of pliable material adapted to rest upon said valve-seat and having a loose portion extending past the damper hinge at all positions of the damper.

3. A wall ventilating duct, square in cross section, having an inturned valve-seat formed by bending the metal of the duct inwardly and thence outwardly, the bottom member of which is transversely oblique to the bottom of the duct, and the continuing side members of which are longitudinally oblique to all members of the duct, and all members arranged in a single plane.

4. A wall ventilating duct, square in cross section, having an inturned valve-seat formed by bending the metal of the duct inwardly and thence outwardly, the bottom member of which is transversely oblique to the bottom of the duct, and the continuing side members of which are longitudinally oblique to all members of the duct and all members arranged in a single plane, and a pliable damper valve hinged to said duct and adapted to contact said valve-seat and effectually close the opening through said duct.

1,204,322. LOCK FOR ELEVATOR HOISTING-ENGINES. THEODORE W. SHOTTO, Scranton, Pa. Filed July 31, 1916. Serial No. 112,359. (Cl. 187—29.)



1. A main lever lock comprising a swinging lever having lateral fingers adapted to pass astride said main lever and an arcuate arm provided with an opening, yielding means normally swinging this lever to unlock the main lever, a bolt normally engaging said opening when the parts are locked, and means for retracting the bolt from a distant point.

2. A main lever lock comprising a swinging lever having lateral fingers adapted to pass astride said main lever and an arm provided with an opening, yielding means normally swinging this lever to unlock the main lever, a bolt normally engaging said opening when the parts are locked, a rock lever pivoted between its ends, a link connecting one extremity thereof with said bolt, an audible signal sounded from a distant point, and a push rod having one end moved when said signal is sounded and the other end engaging the second extremity of said rock lever, for the purpose set forth.

3. A main lever lock comprising a swinging lever having fingers adapted to pass astride said main lever and provided with an opening, yielding means normally swinging this lever to unlock the main lever, a bolt normally engaging said opening when the parts are locked, a rock lever pivoted between its ends and connected at one extremity with said bolt, and a movable visible signal engaging the other extremity of the rock lever and actuated from a distant point.

4. A main lever lock comprising a pivoted swinging lever one arm having lateral fingers adapted to pass astride said main lever and the other arm provided with an opening, yielding means normally swinging this lever to unlock the main lever, a bolt normally engaging said opening when the parts are locked, a rock lever pivoted between its ends and connected at one extremity with said bolt, an audible signal including a movable member, means for moving the latter from a distant point to sound the signal, and a visible signal including a movable element one end of which engages said member and the other end of which engages the other extremity of said rock lever, for the purpose set forth.

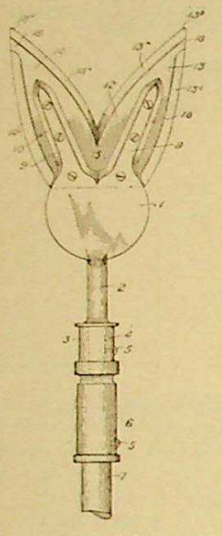
5. A main lever, a swinging lever having fingers adapted to lock said main lever when the swinging lever is in one position, a spring tending to throw it out of said position, and a bolt for holding it locked against the tension of said spring; combined with mechanism for retracting said bolt, an audible signal including a swinging member, a guide and a visible signal consisting of a push rod sliding in the guide and having one end engaged by said member and a disk at its other end engaging said bolt-actuating mechanism, the whole operating substantially as described.

[Claim 6 not printed in the Gazette.]

1,204,323. FARM IMPLEMENT. JEROME V. SOHN, Saybrook, Ill. Filed July 12, 1915. Serial No. 39,275. Renewed Oct. 5, 1916. Serial No. 123,942. (Cl. 55—41.)

1. A farm implement comprising a blade having a plurality of members arranged to form a substantially salient and reëntering angle, the inner converging edges of said

blade members being sharpened, and the outer edges of said members being sharpened while the rear portion of the blade is unsharpened to provide an abutting edge.



2. A farm implement comprising a blade having a plurality of flared members, the inner and outer edges of which are curved and sharpened and a central rear non-sharpened member.

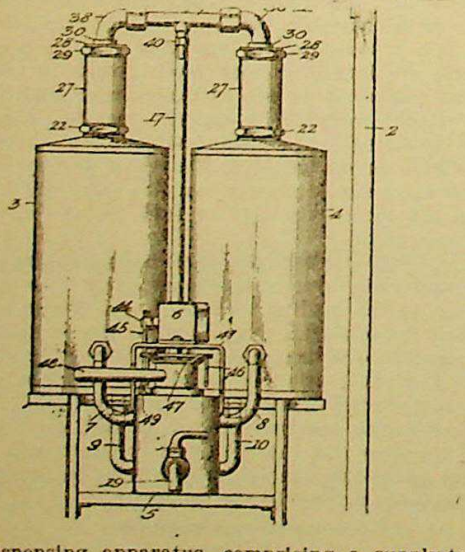
3. A farm implement having a bifurcated blade, the inner and outer edges of which are sharpened except at a part adjacent the outer ends thereof.

4. A farm implement comprising a blade, the supporting element for said blade having a plurality of radiating arms adapted to engage the upper surface of the blade, and means to secure the blade to the supporting element.

5. A farm implement comprising a blade, a supporting element having a shoulder adapted to abut against the blade and a plurality of arms to rest upon the surface of the blade, the arms extending outwardly toward the ends of the blade.

[Claims 6 and 7 not printed in the Gazette.]

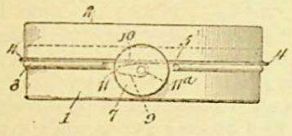
1,204,324. LIQUID-MEASURING DEVICE. PARKER B. SPRAGUE, Denver, Colo. Filed Apr. 4, 1914. Serial No. 829,517. (Cl. 221—116.)



1. Dispensing apparatus, comprising a supply-tank; a pair of receptacles; a valve-casing and a valve therein having independent ports on opposite sides thereof, but in different horizontal planes; a pipe leading from said supply-tank to and in continuous communication with one of said ports; filling pipes extending from the opposite sides of the valve-casing to said receptacles and adapted to be alternately connected through said port with the supply-pipe; a discharge pipe in continuous communication with the other port; and emptying pipes between the valve and said receptacles, adapted to be alternately connected by the latter port with the said discharge pipe; whereby the material to be dispensed is admitted to one receptacle simultaneously with its discharge from the other receptacle.

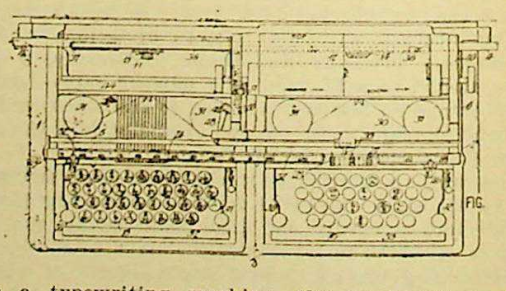
2. The combination with measuring cans of a controlling valve, filling pipes and emptying pipes extending from the valve to the cans, a supply pipe entering the valve on the plane of the filling pipes, a discharge pipe entering the valve on the plane of the emptying pipes, said valve having independent ports, one of which alternately connects the filling pipes and the supply pipe, while the other alternately connects the emptying pipes and the discharge pipe, of a pipe connecting said cans at their upper ends, and float valves in connection with said pipe for permitting air to pass from the filling can to the emptying can, and for automatically closing the egress when the can is filled to the limit of its capacity.

1,204,325. LID-RAISING DEVICE. THOMAS EDWARD SPRING, Pittsburgh, Pa. Filed Feb. 13, 1915. Serial No. 8,005. (Cl. 220—6.)



The combination with a box and a cover fitting over the open end of the box, of a disk pivoted against the outer side of the box and having a roughened peripheral surface for engagement by the fingers to turn the disk in either direction, said disk having an integral radial rib projecting from its inner face and extending from the central portion to substantially the circumference of the disk, said rib being relatively narrow to provide a single contacting nose at one side of the disk and being adapted to lie against the outer side of the box beneath the edge of said cover and to space the disk therefrom, said nose being adapted to engage the edge of the cover upon rotation of the disk in either direction to raise the cover from the box.

1,204,326. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 8, 1914. Serial No. 849,672. Renewed Feb. 8, 1915. Serial No. 6,922. (Cl. 197—5.)



1. In a typewriting machine, the combination of a plurality of keyboards and a plurality of character type-systems, the types in one type-system being supported for creating impressions in normal, reading position, and the types of another type-system being supported for creating impressions whose vertical axes are perpendicular to the vertical axes of the first-named impressions, the keys of the plural keyboards bearing characters all in reading positions.

2. In a typewriting machine, the combination of a plurality of keyboards and a plurality of character type-systems, the types in one type-system being supported

for creating impressions in normal, reading position, and the types of another type-system being relatively larger and supported for creating impressions whose vertical axes are perpendicular to the vertical axes of the first-named impressions, the keys of the plural keyboards bearing characters all in reading positions.

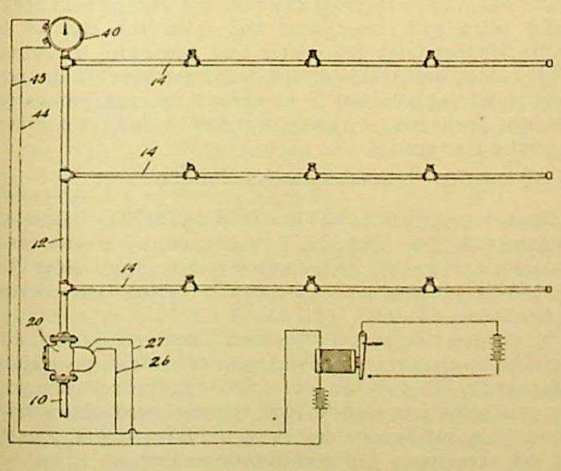
3. The combination, in a twin typewriting machine, of a carriage and a platen operable for two sets of types, and keys therefor, the types of one set representing English characters arranged to create impressions in normal, reading position, and the types of the other set representing agglutinate characters arranged to create impressions whose vertical axes are perpendicular to the vertical axes of the first-named impressions, the keys for both sets of types bearing the characters they represent all in reading positions.

4. The combination, in a twin typewriting machine, of a carriage and a platen operable for two sets of types, and keys therefor, the types of one set representing English characters arranged to create impressions in normal, reading position, and the types of the other set being relatively larger than those of the first-named set and representing agglutinate characters arranged to create impressions whose vertical axes are perpendicular to the vertical axes of the first-named impressions, the keys for both sets of types bearing the characters they represent all in reading positions.

5. The combination, in a twin typewriting machine, of a carriage and a platen operable for two sets of types, and keys therefor, the types of both sets having character representations for impression in two positions of the platen, the type characters for one position in one set of types representing English characters arranged to create impressions in normal, reading position, and the type characters of said set for the other position, together with the type characters for both positions in the other set of types, representing agglutinate characters all arranged to create impressions whose vertical axes are perpendicular to the vertical axes of the English character impressions, the keys for both sets of types in both positions bearing the characters they represent in reading positions.

[Claims 6 to 29 not printed in the Gazette.]

1,204,327. ALARM-CONTROLLING MEANS FOR SPRINKLER SYSTEMS. NATHAN H. SUREN, Needham, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Jan. 28, 1915. Serial No. 4,925. (Cl. 177—382.)



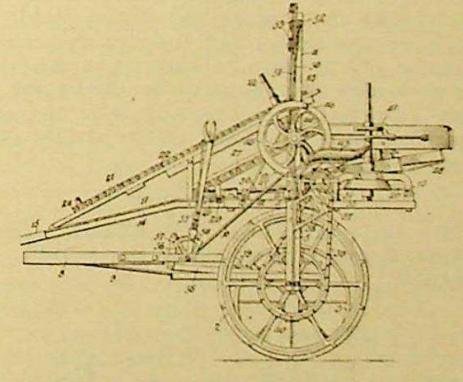
1. In an alarm-controlling means for sprinkler-systems, the combination with the supply-pipe and service-pipe of a sprinkler-system, of a check-valve arranged to open and close communication between said supply-pipe and service-pipe, and a pressure-controlled element connected with the service-pipe, circuit-controllers associated, respectively, with said check-valve and said pressure-controlled element, and a circuit in which said circuit-controllers are arranged in parallel relation, whereby the alarm-circuit will be controlled only upon operation of both circuit-controllers, substantially as described.

2. In an alarm-controlling means for sprinkler-systems, the combination with the supply-pipe and service-pipe of a sprinkler-system, of a check-valve arranged to open and close communication between the supply-pipe and service-pipe, a pressure-gage connected with the service-pipe, circuit-controllers associated, respectively, with said check-valve and pressure-gage, a circuit in which said circuit-controllers are arranged in parallel relation, whereby the circuit will be controlled only upon operation of both circuit-controllers, substantially as described.

3. In an alarm-controlling means for sprinkler-systems, the combination with the supply-pipe and service-pipe of a sprinkler-system of means controlling the flow of water from the supply-pipe to the service-pipe and a circuit-controller associated with said means and responsive to the operation thereof, a pressure-controlled element connected with the service-pipe, and responsive to variations in the pressure therein, a circuit-controller associated with said element, and a circuit arranged to be controlled by and only upon coincident operation of both said circuit-controllers, substantially as described.

4. In an alarm-controlling means for sprinkler-systems, the combination with the supply-pipe and service-pipe of a sprinkler-system, of means responsive to a reduction in the pressure in the service-pipe and also to a rise in pressure in the supply-pipe, and a circuit-controller associated with said means and responsive to the operation thereof, a pressure-controlled element connected with the service-pipe and responsive to variations in the pressure therein, and a circuit-controller associated with said element, and a circuit arranged to be controlled by and only upon coincident operation of both said circuit-controllers substantially as described.

1,204,328. KAFIR-CORN HARVESTER AND BINDER. WILLIAM T. WENTZ, Leon, Kans. Filed Apr. 30, 1915. Serial No. 25,029. (Cl. 56—119.)



1. A Kafir corn header and binder, comprising a vehicle provided with a main frame and wheels carrying the frame, another frame rising from the main frame in fixed relation thereto, a carrier within the second frame and movable up and down therein, means for raising and lowering the carrier with respect to the second frame and to the vehicle, and a header, a gatherer, and a binder in coactive relation one to the other and all mounted on the carrier for up and down movement as a unit therewith.

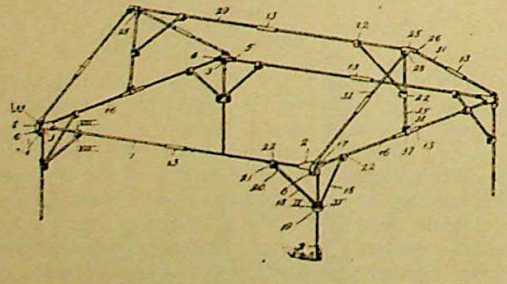
2. A Kafir corn header and binder, comprising a vehicle having a main frame and wheels, an arch frame on and rising from the main frame, another frame mounted on the arch frame and movable up and down therein and extending forwardly and rearwardly of the arch frame, elevating and lowering means for the third-named frame connected to opposite sides thereof and extending over the arch frame to a common point of manipulation at one side of the arch frame, and gathering, heading and binding devices on the third-named frame in coöperative relation to each other and movable up and down as a unit with the third-named frame.

3. A Kafir corn header and binder, comprising a vehicle, an upright arch frame mounted thereon, a carrier mounted on the arch frame and slidable up and down therein and provided with forward divergent continuations, gathering means carried by the forward divergent continuations, heading mechanism mounted on the carrier at the rear of and in coöperative relation to the gathering means, binding mechanism mounted on the carrier to the rear of the gathering and heading mechanism and in coöperative relation thereto, the gathering, heading and binding mechanisms all being supported by and movable simultaneously with the carrier as a unit, and means on the arch frame for supporting, elevating and lowering the carrier.

4. A Kafir corn header and binder, comprising a vehicle, an upright arch frame mounted thereon, a carrier mounted on the arch frame and slidable up and down therein and provided with forward divergent continuations, gathering means carried by the forward divergent continuations, heading mechanism mounted on the carrier at the rear of and in coöperative relation to the gathering means, binding mechanism mounted on the carrier to the rear of the gathering and heading mechanism and in coöperative relation thereto, the gathering, heading and binding mechanisms all being supported by and movable simultaneously with the carrier as a unit, and means on the arch frame for supporting, elevating and lowering the carrier, said last-named means comprising a winding drum at one side of the arch frame, and flexible strands leading to opposite sides of the carrier and having supporting and directing devices for the strands for guiding the latter over the arch of the arch frame.

5. A Kafir corn header and binder, comprising a vehicle, an arch frame on and rising from the vehicle at one side of the latter, another frame constituting a carrier and extending forwardly and rearwardly from the arch frame and connected to the latter at an intermediate point of the length of the carrier for sliding movements up and down on the arch frame, a winding drum on one side of the arch frame, flexible strands extending along the uprights of the arch frame and across the top thereof to opposite sides of the carrier and also connected to the winding drum for raising and lowering the carrier by manipulation of the drum, a gatherer, a header, and binding mechanism all mounted on the carrier and simultaneously participating to like extents in the up and down movements of the carrier on the manipulation of the winding drum.

1,204,329. COLLAPSIBLE TENT-FRAME. JOHN E. WILKINS, Kansas City, Mo. Filed May 1, 1916. Serial No. 94,593. (Cl. 135—4.)



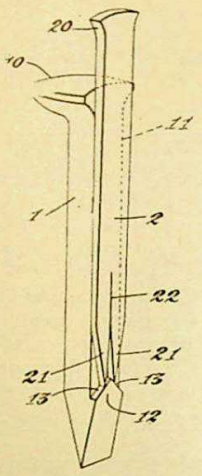
1. In a tent frame, a rectangular frame having corner fittings each of which latter has a pair of downwardly extending flanges, one of the flanges of each pair of flanges having a vertical abutment, legs having their upper ends extending between said flanges, a ridge pole having gable parts, members secured to the gable parts and engaged with the vertical abutments so as to be held by the latter against turning, and pins passed through the flanges and members.

2. In a tent frame, a rectangular frame having corner fittings each formed of a single blank having a socket and two pairs of flanges, one of the flanges of each fitting being bent at right angles at its free edge to form a vertical abutment, a ridge pole having gable parts, members secured to the gable parts and engaged with the abutments, legs having their upper ends extending between one of the pairs of flanges of the respective fittings, and pins passed through the members of the gable parts and through the legs and the flanges of the fittings which receive the legs.

3. In a tent frame, a corner fitting formed of a single sheet metal blank one end of which is folded inwardly and bent at right angles across the line of fold to provide two pairs of flanges and one side of which is rolled over to form a tubular member.

4. In a tent frame, a ridge fitting formed of a single sheet metal blank folded to form a pair of oppositely inclined flanges, a tubular horizontal portion extending outwardly from the point of juncture of said flanges, and a pair of flanges depending from the horizontal tubular portion.

1,204,330. RAIL-SPIKE. ADOLPHUS G. ADAIR, Seattle, Wash. Filed Mar. 4, 1915. Serial No. 12,172. (Cl. 85—23.)



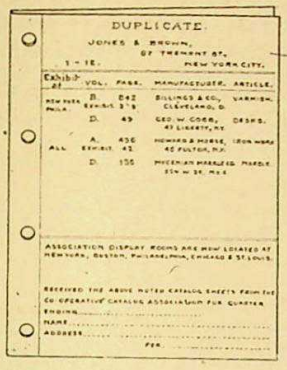
A rail spike having a head projecting laterally to overlap the edge of the rail base, and at the opposite side being flush with the side of the stem, the latter side of the stem having a side projection near its point, and a locking member consisting of a thin, flat spike adapted to fit against and to be driven along the side of the main spike which is away from the rail, the end of said locking spike being split lengthwise and with the tips of said splits tapered from the center and the outer margins to form points well inside of the outer margins of the spike, said tips being adapted to be spread by engagement with the side projection of the main spike to be thereby driven laterally into the tie.

1,204,331. COÖPERATIVE ADVERTISING. GEORGE A. ANNABLE, New York, N. Y., assignor, by mesne assignments, to Sweets Catalogue Service, Inc., New York, N. Y., a Corporation of Delaware. Filed Dec. 20, 1909. Serial No. 534,021. (Cl. 11—7.)

1. Coöperative advertising means comprising individual catalogues of different advertisers of different specialties or products uniform in size and bound together and an index thereto arranged in four columns containing respectively page references, names of the advertisers, locations of the advertisers and classifications thereof.

2. Coöperative advertising means comprising individual catalogues of different advertisers of different specialties or products uniform in size and bound together, three separate indices thereto, one index being arranged according to the names of the advertisers, the second index being arranged according to the business or trade of the advertisers and the third index being arranged according to the locality of the advertisers and each index having four columns containing respectively page references, names

of the advertisers, locations of the advertisers and classifications thereof.



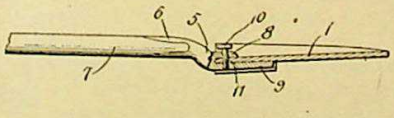
3. Means for coöperative advertising comprising, a loose leaf set of uniform advertisements of different advertisers in different localities, an index therefor arranged according to names, an index arranged according to classification, an index arranged according to different localities, and a lock binder for securing the same together.

4. Means for coöperative advertising comprising, a loose leaf set of advertisements of different advertisers of different classes in different localities, one or more indices therefor giving the names, classes and locations and containing references to the location of displays of the advertised classes and a binder securing the same together.

5. Means for coöperative advertising comprising, a loose leaf set of advertisements of different advertisers of different classes in different localities, one or more indices therefor and a supplementary index of new matter containing references to the location of displays of the advertised classes and means binding the same together.

[Claims 6 to 8 not printed in the Gazette.]

1,204,332. ENTRENCHING-TOOL. FLOYD P. ARCHER, Wilkes-Barre, Pa. Filed Feb. 15, 1916. Serial No. 78,494. (Cl. 55—14.)



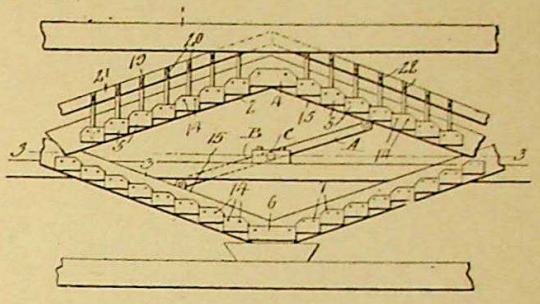
1. An entrenching tool including a digging member, converging flanged strips secured to said digging member, a bifurcated handle having one portion engaging the digging member and the other portion received by said flanged strips, and spring-held means for locking said digging member with said handle portions.

2. An entrenching tool, including a digging member, converging channeled ways arranged upon said digging member, a bifurcated handle having one portion thereof engaging the digging member, and the other portion thereof received by the channeled ways, and means for locking the said digging member to said handle portion.

3. An entrenching tool including a digging member, converging channeled ways arranged upon said digging member, a bifurcated handle having one portion thereof engaging the digging member, and the remaining portion received by said channeled ways, and means for locking the digging member to the handle.

4. An entrenching tool including a digging member, converging channeled ways arranged upon said digging member, a bifurcated handle having one portion engaging the digging member, and the other portion received by said channeled ways, a movable pin engaging the digging member and the bifurcated portion of the handle, and spring means engageable with said pin for holding the same in engaged position.

1,204,333. CONCENTRATOR. LYNN W. BARBER, Hetland, S. D. Filed Feb. 10, 1915. Serial No. 7,327. (Cl. 83—88.)



1. A separator of the character described comprising an upper series of separating pans consisting of a central receiving pan having outlets at its opposite sides and gradient rows of pans arranged on opposite sides thereof and extending at an outward and downward angle in stepped relationship, a lower series of pans having a central discharge pan provided with outlets at its opposite sides and gradient rows of pans on opposite sides thereof and extending outwardly and upwardly in stepped relation, the pans of the lower series being arranged to receive the material flowing from the terminal pans of the upper series, and means for establishing relative motion between the pans of the respective series to effect movement of the material being separated.

2. A separator of the character described comprising upper and lower sets of separating devices, each consisting of a central pan and separating pans on opposite sides thereof, the separating pans of the upper series inclined outwardly and downwardly from the center pan and the separating pans of the lower series inclined outwardly and upwardly from the central pan thereof, the separating pans of each set being arranged in stepped relation and the central pan of the lower series being provided with an outlet for the tailings, and means for reciprocating said pans.

3. A separator of the character described comprising upper and lower series of separating pans, each including a central pan and separating pans on opposite sides thereof, the separating pans of the upper series being inclined downwardly and outwardly from the central pan thereof, and the separating pans of the lower series being inclined outwardly and upwardly from the central pan thereof, said central pans respectively serving as an inlet and outlet, and means for imparting relative motion to the upper and lower sets or series of pans.

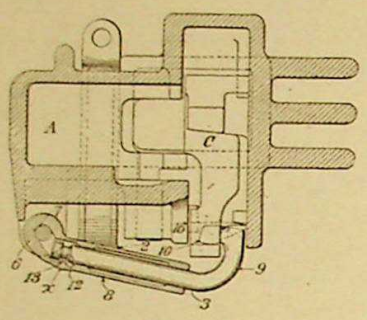
4. A separator of the character described including an upper series of pans, consisting of a central receiving pan and stepped sets of separating pans inclining downwardly and outwardly at opposite sides thereof, a lower series of pans including a central discharge pan and separating pans arranged in stepped order and inclining upwardly and outwardly on opposite sides thereof, the pans of the lower series being greater in number than the pans of the upper series and adapted to receive the material therefrom, and agitators within the pans, supporting means for holding said agitators stationary, and means for imparting relative motion to the sets of pans.

1,204,334. CAR-COUPLING. ARTHUR J. BAZELEY, Cleveland, Ohio, assignor to The National Malleable Castings Company. Filed July 12, 1913. Serial No. 778,670. (Cl. 213—10.)

1. In coupler operating mechanism, a lever pivotally mounted on the coupler head and arranged to swing transversely thereof, a rod secured to the lever having an actuating connection with the lock, said rod being adapted to swing transversely with the lever and having a rotative movement independent thereof about its own longitudinal axis.

2. In coupler operating mechanism, a lever pivotally mounted on the coupler head and a rod forming an actuating connection between the lock and the lever, said rod

being adapted to be rotated with the lever about the pivot of the lever and being arranged also for rotation about the long axis of the lever.



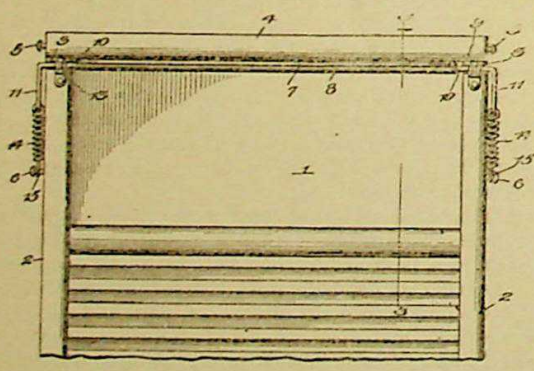
3. In a coupler operating mechanism, a lever pivotally mounted on the coupler head and arranged to swing transversely thereof, and a rod journaled in said lever and arranged longitudinally thereof, said rod having an actuating connection with the lock and being adapted to swing transversely with the lever and having a rotative movement independent thereof.

4. In coupler operating mechanism, a lever pivoted to a coupler-head, and a rod secured to said lever and having an actuating connection with the lock and being adapted to be rotated about the axis of said lever, said rod being adapted to engage the under side of the coupler-head to prevent the lock from creeping.

5. In coupler operating mechanism a lever mounted on an axis arranged longitudinally of the coupler-head, and an actuating connection between the lever and the lock, the said actuating connection being arranged to rotate about the axis of the lever and also to rotate about an axis arranged at right angles to the axis of the lever.

[Claim 6 not printed in the Gazette.]

1,204,335. WASHBOARD-PROTECTOR. FRIEDERICH WILLIAM BECKER, New Athens, Ill. Filed Jan. 27, 1916. Serial No. 74,638. (Cl. 68—29.)

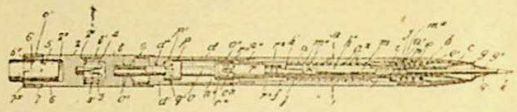


1. The combination with a washboard having bearings in its side bars adjacent the top; of a protector plate with pintles disposed in said bearings, cranks on said pintles adapted to be swung from beneath said pintles to above the same adjacent the top upon movement of the plate from an angle to the board to flush with the same, studs at the ends of the side bars and said top past opposite sides of the center of the bearings, and coiled springs on the ends of said cranks adapted for alternate engagement with the studs on said side bars or top to hold the plate either at an angle or flush with respect to the board.

2. The combination with a washboard having alined transversely extending notches in its side bars, of a rod extending across said board and removably positioned in the notches, laterally bent extremities on the projecting ends of said rod to form cranks for the same, a protector plate having one side rigidly secured to said rod between the pintles, studs on said side bars, and coil springs adapted to connect said cranks and studs.

3. The combination with a washboard having alined transversely extending notches in its side bars, of a rod extending transversely across said bar and positioned in said notches, means for removably securing said rod therein, the opposite ends of said rod projecting from the side bars with their extremities bent laterally and lying parallel to form cranks, a substantially rectangular shaped protector plate having one side surrounding the said rod between the portions of the same positioned in the notches, studs on said side bars, and coil springs adapted to connect said cranks and studs.

1,204,336. PENCIL. WILLIAM H. BLAKE, Jersey City, N. J. Filed Nov. 11, 1913. Serial No. 800,255. (Cl. 120—18.)



1. A pencil including a casing; lead-gripping jaws; a lead-holder; lead-holder-feeding mechanism; and means for releasing the grip of said jaws upon the lead, when said lead-holder is out of engagement with said jaws; said means being arranged to actuate said lead-holder-feeding mechanism.

2. A pencil including a casing formed with a nose-piece; yielding lead-gripping jaws normally held in gripping position by said nose-piece; lead-holder feeding mechanism; and means by which said jaws are moved relatively to said nose-piece and are disengaged from the casing and permitted to spring apart, when said lead-holder is out of engagement with said jaws; said means being arranged to actuate said lead-holder-feeding mechanism.

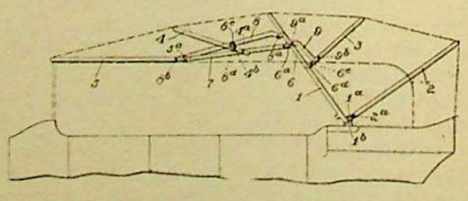
3. A pencil including a slidable guide-tube formed with lead-gripping jaws; a casing the pencil end of which presses said jaws into gripping position; a lead-holder which is carried by and slidable relatively to said guide-tube and is in engagement with said casing; and means by which said guide-tube is moved lengthwise relatively to said casing to disengage said jaws from said casing and thereby to permit said jaws to spring apart, when said lead-holder is out of engagement with said jaws; said means being arranged to turn said lead-holder relatively to the casing and thereby to feed the lead-holder.

4. A pencil including a casing; lead-gripping jaws; a lead-holder; lead-holder-feeding mechanism; means for maintaining said mechanism inoperative; and mechanism for releasing the grip of said jaws upon the lead and actuating said lead-holder-feeding mechanism.

5. A pencil including a casing; lead-gripping jaws; a lead-holder; lead-holder-feeding mechanism; means by which said mechanism is interlocked with said casing to maintain said mechanism normally inoperative; and mechanism for releasing the grip of said jaws upon the lead and actuating said lead-holder-feeding mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,204,337. TOP FOR VEHICLES AND THE LIKE. MAX BUCH, Detroit, Mich., assignor to Henry E. Edwards, Jackson, Mich. Filed Nov. 15, 1915. Serial No. 61,611. (Cl. 21—62.)



1. A vehicle top comprising a pivoted arm or standard, a front bow arm, a member pivoted to the front bow arm and to the standard, a link S pivoted to the standard above said member and to the front bow arm in front of the pivot of said member, an intermediate bow arm having its

extremity pivoted to said member, and a sliding connection between said intermediate bow arm and said link, said sliding connection operating longitudinally of the intermediate bow arm.

2. A vehicle top comprising a pivoted arm or standard, a front bow arm, a member pivoted to each side of the front bow arm, and to the standard, a link pivoted to each side of the standard above said member and to the front bow in front of the pivot of said member, an intermediate bow arm having its extremity pivoted to said member, said intermediate bow arm having a longitudinal slot and a pin on said link engaging said slot.

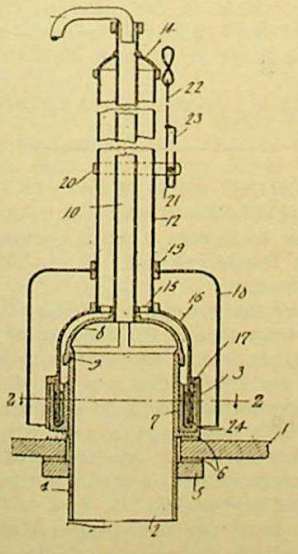
3. A vehicle top comprising a standard, a front bow arm, a lever member pivoted to the front bow arm and to the standard and having a part extended beyond its pivoted connection, a link pivoted to the standard above said lever member and to the front bow arm in front of the pivoted connection to said lever member, a front intermediate bow arm having its extremity pivoted to said lever member and having a lengthwise sliding connection with said link, a rear auxiliary bow arm pivoted to said standard, and a link connecting the extension of said lever member with the said auxiliary bow arm.

4. A vehicle top comprising a pivoted arm or standard, a front bow arm, a member pivoted to the front bow arm and to the standard, a link having a curved end pivoted to the standard above said member and to the front bow arm in front of the pivot of said member, an intermediate bow arm having its extremity pivoted to said member, and lugs or brackets extending laterally from said links and having sliding connections with said intermediate bow lengthwise thereof.

5. A vehicle top comprising a pivoted arm or standard having a pair of forwardly extending lugs one located above the other, a front bow arm, a lever member pivoted to the front bow arm and to the lower lug, and having a part extended beyond its pivoted connection, a link pivoted to the upper lug and to the front bow arm in front of the pivoted connection to said lever member, a front intermediate bow arm having its extremity pivoted to said lever member and having a sliding connection with said link operating in the plane of the intermediate bow arm, a rear auxiliary bow arm pivoted to a lug projecting rearwardly from said standard, and a link connecting the extension of said lever member with the said auxiliary bow arm.

[Claims 6 to 9 not printed in the Gazette.]

1,204,338. FLUSH-VALVE. THOMAS J. CAHILL, Corpus Christi, Tex. Filed May 13, 1916. Serial No. 97,347. (Cl. 4—5.)



1. In a device of the class described, a flush tank including a bottom; a sleeve assembled with the bottom; a trough carried by the sleeve; a spider assembled with the sleeve; a guiding means carried by the spider; inner and outer connected caps slidable on the guiding means, the inner cap embodying an extension adapted to dip into the trough, the outer cap being of greater diameter than the trough; and means for lifting both caps.

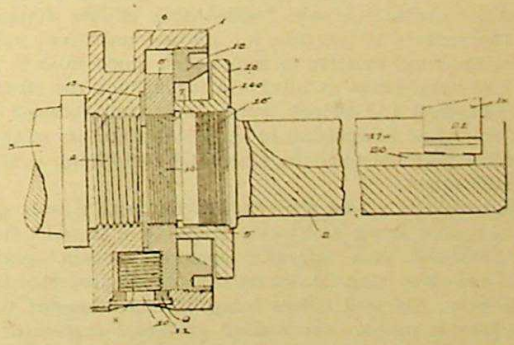
2. In a device of the class described, a sleeve; a circumscribing trough carried by the sleeve; a second trough in the first specified trough and fashined from inamalgamative material; a cup adapted to dip into the inamalgamative trough; a float; and means for connecting the float with the cup.

3. In a device of the class described, a flush tank bottom; a sleeve therein; a trough carried by the sleeve; clamping means on the sleeve, the clamping means and the trough coöperating with opposite faces of the bottom to hold the sleeve on the bottom; a cup adapted to dip into the trough; a float; and means for connecting the float with the cup.

4. In a device of the class described, a sleeve, a trough assembled with the sleeve; a cup dipping into the trough and provided with a circumscribing shoulder adapted to rest on the top of the trough; means for raising and lowering the cup; and a float operatively connected with the cup.

5. In a device of the class described, a flush tank bottom; a sleeve extended through the bottom; an outer trough carried by the sleeve and coacting with the inner face of the bottom to support the sleeve; an inner trough within the outer trough and fashioned from inamalgamative material; a cup fashioned from inamalgamative material and dipping into the inner trough, the cup being provided with an outstanding circumscribing shoulder resting on the upper edge of one trough; an outer tube connected with the cup; an inner tube located within the outer tube and constituting a guide for the outer tube; a spider connecting the inner tube with the sleeve; and a bell-shaped float carried by the outer tube and surrounding the outer trough.

1,204,339. BORING-TOOL. HERMAN CASLER, Canastota, N. Y. Filed Feb. 9, 1914. Serial No. 817,461. (Cl. 77—58.)



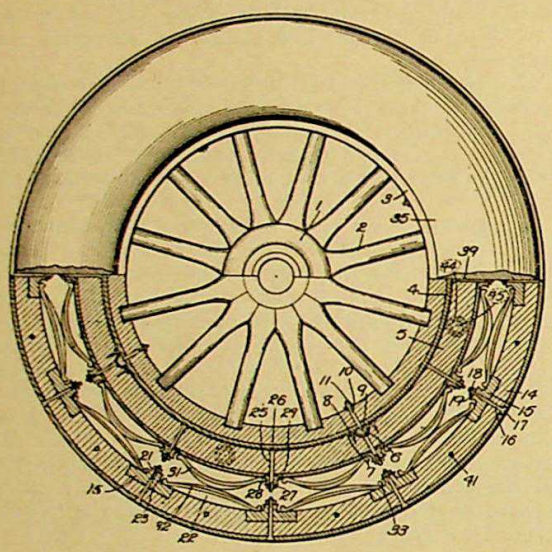
1. A boring tool comprising a head having a member adjustable crosswise thereof, means for holding said member in its adjusted position, a boring bar having one end supported by said member and provided with threads thereon, and a nut turning on said threads against said member, substantially as and for the purpose set forth.

2. A boring tool comprising a head having a member adjustable crosswise of the axis thereof, means for holding said member in its adjusted position, the adjustable member being formed with a threaded opening, a boring bar having one end threaded and turning in the threaded opening of the member, the bar being also formed with additional threads near said end, and a nut turning on the last mentioned threads against the member, substantially as and for the purpose specified.

3. A boring tool comprising a head having a member adjustable crosswise of the axis of the head, means for holding said member in its adjusted position, a boring bar connected to the head and having threads thereon, and a nut turning on the boring bar against said means, substantially as and for the purpose set forth.

4. A boring tool comprising a head for attachment to a spindle, the head being formed with a recess, a slide located at the bottom of the recess and adjustable crosswise of the axis of the head, means for adjusting the slide, an internal nut threading into the recess against the slide, a boring bar threading in the slide, and a nut threading on the boring bar and bearing against the slide, substantially as and for the purpose described.

1,204,340. SPRING-WHEEL. SAMUEL D. CHAPMAN, Kansas City, Mo. Filed June 3, 1914, Serial No. 842,644. Renewed Sept. 5, 1916. Serial No. 118,551. (Cl. 152—38.)



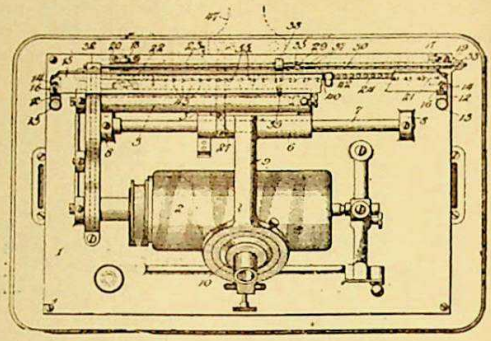
1. In a vehicle wheel, the combination with a body portion, of spaced inner and outer rings; one of said rings being provided with laterally opening sockets, guards fixed to the other ring, bosses on the guards projected into said sockets; the said bosses being of less diameter than the sockets to provide for limited universal movement of the rings relative to each other, stops fixed to the inner and outer rings at intervals throughout the circumference thereof, and paired springs arranged between adjacent stops and comprising independent members adapted for limited play between the stops and for wiping contact with each other.

2. In a vehicle wheel, the combination with a body portion, of spaced inner and outer rings; one of said rings being provided with laterally opening sockets, guards fixed to the other ring, bosses on the guards projected into said sockets; the said bosses being of less diameter than the sockets to provide for limited universal movement of the rings relative to each other, stops fixed to the inner and outer rings at intervals throughout the circumference thereof, and paired springs arranged between adjacent stops and comprising independent members adapted for limited play between the stops and for wiping contact and longitudinal movement relative to each other.

1,204,341. PHONOGRAPH ATTACHMENT. CHARLES L. CHISHOLM, Marysville, New Brunswick, Canada, assignor of one-fourth to Edward G. Siggers, Washington, D. C. Filed July 17, 1911. Serial No. 638,977. (Cl. 274—17.)

1. An attachment for sound reproducing machines comprising an index finger or pointer, and means responsive to the progressive movement of the sound reproducing elements of the sound reproducing machine for causing a greater linear movement of the index or pointer than the linear movement of the sound reproducing elements with relation to the sound record.

2. In a sound reproducing machine, sound reproducing elements movable progressively with relation to a sound record, and indicating means for the progress of the sound reproducing elements with relation to the sound record, said indicating means including an index or pointer, and speed magnifying connections between those parts of the sound reproducing mechanism movable with relation to the record and the index or pointer.



3. In a sound reproducing machine having sound reproducing devices, movable progressively with relation to a sound record tablet on the machine, an index member of greater length than the extent of travel of the sound reproducing devices with reference to the record, an index or pointer movable along the index member, and speed multiplying connections between the sound reproducing devices and said index or pointer.

4. In a talking machine provided with a sound box and carrier therefor, and also with a support for a sound record, an index member having indicia thereon, an index or pointer movable with relation to said index member, and connections between said index or pointer and the sound box carrier movable progressively with relation to a sound record mounted on the machine, said connections including means for imparting to the index or pointer a greater range of movement than the movement of the sound box carrier.

5. In a talking machine provided with a sound box and carrier therefor, and also with a support for a sound record, an elongated index member, an index or pointer mounted for linear movement along and with respect to said index member, and attachments for connecting the index member to the sound box carrier of the machine, said attachments being movable progressively with relation to a sound record when mounted on the machine for impelling the index or pointer, and including coactive rotating members of different diameters and linearly movable members individual to the different coactive rotating members, one of said linearly movable members being connected to the index or pointer and the other to the sound box carrier.

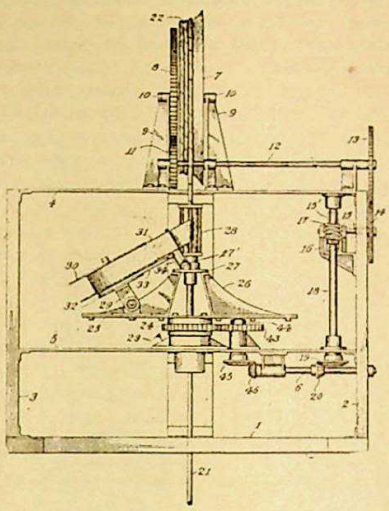
[Claims 6 to 15 not printed in the Gazette.]

1,204,342. MACHINE FOR WRAPPING HOSE AND SIMILAR ARTICLES. HENRY Z. COBB, Winchester, Mass., assignor to Revere Rubber Company, a Corporation of Rhode Island. Filed Feb. 4, 1915. Serial No. 6,022. (Cl. 28—6.)

1. In a machine for wrapping ribbons of sheet material, in combination with means for feeding the article to be wrapped at a fixed rate, a support rotatable about said article, a spool for carrying a supply of said sheet material mounted eccentrically on said support, and a winding head connected with said support, said winding head comprising a circular series of parallel elongated pressure rolls and a fixed tension bar on said winding head adjacent one of the rolls of said series.

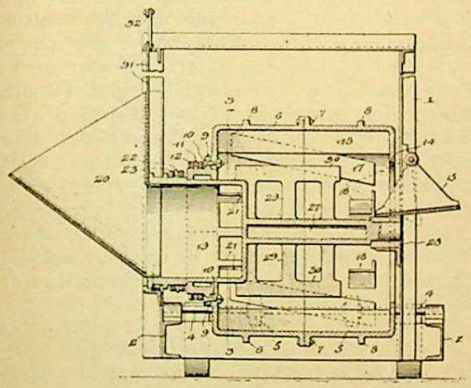
2. A winding head for wrapping ribbons of adhesive sheet material about a coreless elastic flexible article comprising a rotatable frame, a series of parallel elongated anti-friction rolls carried thereby and adapted to hold

said article from bending and to force said material into intimate contact with said article, and a tension and



guiding bar located between two of said rolls over which said material is adapted to pass and be immediately set under pressure by said rolls.

1,204,343. MIXING-MACHINE. FRANK A. CONNOLLY, Pompton Lakes, N. J. Filed July 25, 1916. Serial No. 111,237. (Cl. 83—73.)

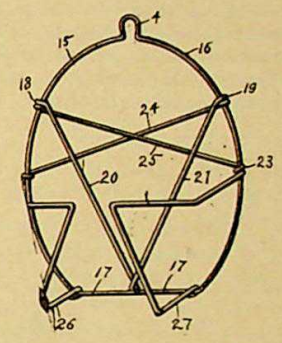


1. A mixer of the class described comprising a main drum having in one end an opening, an auxiliary drum projecting into said opening and having its outer end open for the reception of the material to be mixed, the inner end of said auxiliary drum being closed and having one or more openings for discharging the material into the main drum, means for driving the two drums in opposite directions, separate agitating means rotatable with said drums and operating adjacent each other, and means for permitting the discharge of the mixed material from the main drum.

2. A mixer of the class described comprising a main drum having at one end an opening, an auxiliary drum projecting into said opening and having an open outer end to receive the material to be mixed, the inner end of said auxiliary drum having one or more openings for discharging the material into the main drum, means for rotating the two drums in opposite directions, an agitator carried by the inner end of the auxiliary drum and disposed in the main drum, agitating means on the interior of said main drum, and means for permitting the discharge of the mixed material from said main drum.

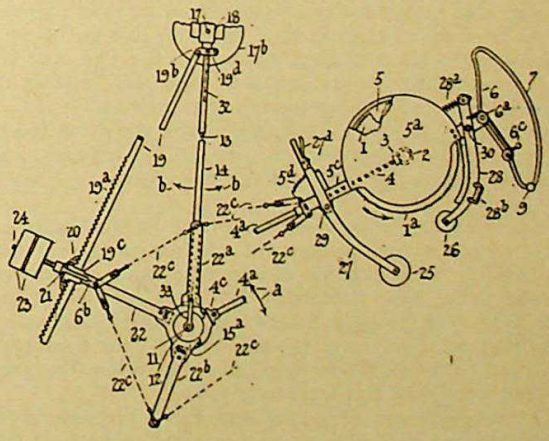
3. A mixer of the class described comprising a main drum having in one end an opening, an auxiliary drum extending into said main drum through said opening, said auxiliary drum having an open outer end to receive the material to be mixed and having a closed inner end formed with one or more openings for discharging the material into the main drum, means for rotating the two drums in opposite directions, a shaft extending axially from the inner end of the auxiliary drum through the main drum and having its free end rotatably supported, arms radiating from said shaft, paddles on the outer ends of said arms, agitating means on the interior of the main drum, and means for permitting the discharge of the mixed material from said main drum.

1,204,344. RECEPTACLE FOR POT-LIDS. JOHN J. DALTON, Seattle, Wash. Filed Apr. 22, 1913, Serial No. 762,891. Renewed Apr. 1, 1916. Serial No. 88,404. (Cl. 65—65.)



A pot lid holder, comprising a wire frame bent to form a central loop, and oppositely curved sides, the ends of which are projected inward and interlocked, then diverged and bent around the upper portions of the sides, then crossed, and again bent around the sides, then angularly bent to form horizontally-alined members having diverging portions at their inner ends spaced apart at their upper ends to provide a passage for the lid handle, and having right angular lid supports at their lower ends connected to the frame.

1,204,345. SAWING-MACHINE FOR HALVING CARCASSES. DANIEL DAVEY, Maribyrnong, and HARRY MAISON, Flemington, Victoria, Australia. Filed Mar. 13, 1916. Serial No. 83,929. (Cl. 17—30.)



1. In a carcass sawing machine, a circular saw having a casing from which part of the saw projects, means to rotate the saw, jointed supporting means to allow the casing and saw to be moved into any position required for halving a suspended carcass, a member pivoted on opposite sides of the center of the saw, each member having a roller at its end, to contact with the inside and outside of the carcass to guide the saw.

2. In a carcass sawing machine, a circular saw, and, near its cutting edge, one or more members such as rollers to be guided by the carcass surface, and framing carrying the saw and having weighted means to cause the saw to rise when its handles are uncontrolled, and a device on the framing and connected to the handles, to enable the said rise to be stopped.

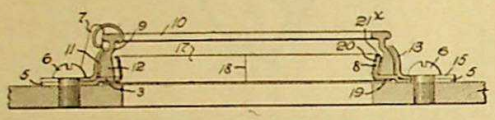
3. In a carcass sawing machine, a circular saw, near which are pivoted two arms each carrying a grooved member to be located during sawing with its groove engaging and guided by a separate spinal ridge of the carcass part of said carcass being gripped between the said grooved members.

4. In a carcass sawing machine, a circular saw, and supported near its cutting edge, sections forming a groove and having means to yieldingly press them toward one another, and adapted during sawing to rest on and be guided by a spiral ridge of the carcass.

5. In a carcass sawing machine, a circular saw, and supported near its cutting edge, grooved rollers in sections, with means to yieldingly press the sections toward one another, the sections being adapted, when required during sawing, to rest on and be guided by respective internal and external spinal ridges of a suspended carcass.

[Claims 6 to 15 not printed in the Gazette.]

1,204,346. ROTARY SPINNING-RING. SAMUEL S. DEARBORN, Boston, Mass. Filed Dec. 19, 1910. Serial No. 598,195. (Cl. 118—60.)



1. A rotary spinning ring comprising in combination a traveler ring rotatable by yarn tension, a traveler, a base or support whereon said ring is rotatable and having ring guiding means extending within the traveler ring, and shielding means distinct from said guiding means to exclude lint, etc., from the latter, said shielding means being exposed to the clearing action of said traveler.

2. A rotary spinning ring comprising in combination, a traveler ring rotatable by yarn tension, a treveler, a base or support whereon it is rotatable and having ring guiding means extending within the traveler ring, and stationary shielding means within said guiding means to exclude lint, etc., from said guiding means and exposed to the clearing action of said traveler.

3. A rotary spinning ring comprising in combination, a traveler ring rotatable by yarn tension, a traveler therefor, a base or support whereon it is rotatable and having ring guiding means extending within the traveler ring, and stationary shielding means distinct from and within the traveler ring and non-contacting with the latter, to exclude lint, etc., from said guiding means and from the inner face of the ring below the path of the traveler, said shielding means being exposed to the clearing action of the traveler.

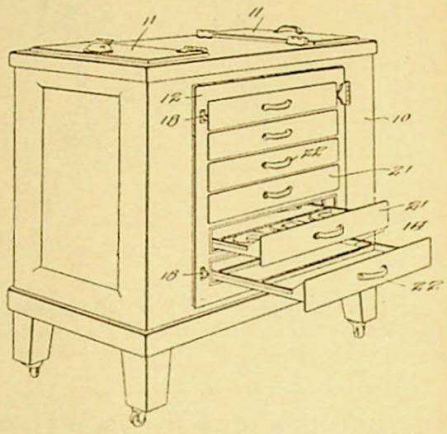
4. A rotary spinning ring comprising in combination a traveler ring, a base or support whereon it is rotatable, and having ring guiding means extending within the traveler ring, and stationary shielding means distinct from said ring guiding means and positioned both interiorly of and exteriorly to said traveler ring to exclude lint, etc., from the surfaces of the ring below the traveler and from said ring guiding means.

5. A rotatable spinning ring comprising in combination a traveler ring rotatable by yarn tension, a base or support whereon said ring is rotatable and having ring guiding means extending within the traveler ring and stationary shielding means distinct from and within the guiding means and non-contacting with the bearing surface of the latter to exclude lint, etc., from said guiding means and from the inner face of the ring below the path of the traveler.

[Claims 6 to 10 not printed in the Gazette.]

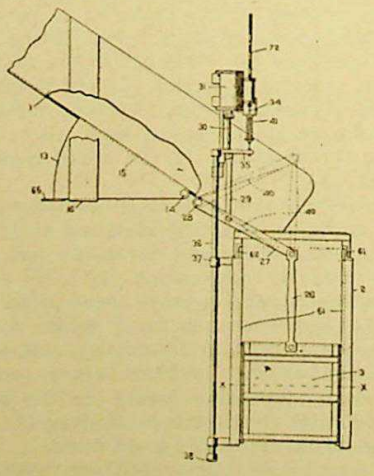
1,204,347. REFRIGERATOR. VICTOR A. DE CANIO, Union Hill, N. J., assignor to Lorillard Refrigerator Co., New York, N. Y., a Corporation of New York. Filed Apr. 14, 1914. Serial No. 831,820. (Cl. 45—71.)

1. In a refrigerator, the combination with a box-like body having an opening in its front, and two upright partitions in the body defining cooling compartments and a food compartment between them, each partition being composed of a series of spaced horizontal guides alined with the edges of the front opening; of a door hinged at one edge to said front and adapted to close the opening therein and itself having a series of transverse openings, means for fastening the door when closed, and a series of drawers each having a shallow body adapted to pass through one of the door-openings and engage a pair of said guides, each drawer also having a wide front panel adapted to fit into and close its door-opening when the drawer is closed.



2. In a refrigerator, the combination with a box-like body having openings in its top near the ends thereof and a large opening in its front between the other openings, two upright partitions in the body defining cooling compartments beneath said endmost openings and a food compartment between the cooling compartments, each partition being composed of a series of spaced horizontal guides alined with the edges of the front opening, and covers for closing said endmost openings; of a door movably carried by the refrigerator front and adapted to close the large opening therein and itself having a series of transverse openings, and a series of drawers slidable through said transverse openings and each having a shallow body whose edges engage a pair of said guides and a wide front panel adapted to close its respective opening in the door when the drawer is closed.

1,204,348. COAL-LOADING APPARATUS. HARRY B. DOHERTY, Everett, Mass., assignor of one-half to James M. McClellon, Everett, Mass. Filed Sept. 19, 1914. Serial No. 862,502. (Cl. 214—1.)



1. In a loading apparatus, the combination with a receiving member, of means to deliver material thereto, means actuated by a car passing adjacent said member to effect a transfer of the contents of said member to the car, means to prevent the delivery of material to the member while such transfer is being effected, and other means

independent from the last-named means to prevent the delivery of material to said member when the latter has received a predetermined amount.

2. The combination with a receiving member having a discharge opening and a gate therefor, of a chute to deliver material to the receiving member, means set in operation by a car passing adjacent said member to open the gate thereby to effect transfer of its contents to the car, means operative when the gate is open to stop delivery of material through the chute into said receiving member, and other means independent from the last-named means to prevent the delivery of material to said member when the latter has received a predetermined amount.

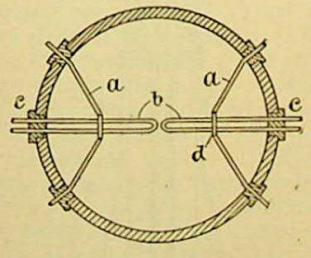
3. In a loading apparatus, the combination with a receiving member having a discharge opening and a gate therefor, of a chute to deliver material to said member, a gate by which the chute may be closed, connections between said gates whereby they operate simultaneously and in such manner that the gate for the chute is closed when the gate for the receiving member is open and vice versa, means set in operation by a car passing beneath said member to open the gate thereof whereby the contents of said member will be discharged into the car and to close the gate of the chute, and means structurally independent from said latter gate to prevent the delivery of material to said member when the member has received a predetermined amount.

4. In a loading apparatus, the combination with a receiving member having a discharge opening and a gate therefor, of a chute to deliver material to the receiving member, a normally open gate to close the chute, connections between said gates whereby they operate in unison but oppositely so that when one is open the other is closed and vice versa, car-actuated means to operate the gates and other means to stop the flow of material to the receiving member when the latter has received a predetermined amount.

5. In a loading apparatus, the combination with a receiving member having a discharge opening and a gate therefor, of a chute to deliver material to the receiving member, a normally-open gate to close the chute, connections between said gates whereby when one is open the other is closed, an actuating cylinder having a power piston therein connected to said gates, means actuated by a car passing beneath the receiving member to control the operation of said piston and other means to prevent the delivery of material to the receiving member when it has received a predetermined amount.

[Claims 6 to 15 not printed in the Gazette.]

1,204,349. ELECTRIC-ARC FURNACE. CARL OLAF ANDERSEN DÖVLE, Notodden, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed Jan. 10, 1914. Serial No. 811,420. (Cl. 204—31.)



1. In an electric arc furnace, the combination with electrodes thereof in which the arc moves along the electrodes and said electrodes are subjected to the vibratory action of the arc; of means inside the furnace to prevent vibrations of the electrodes.

2. In an electric arc furnace, the combination with an electrode thereof in which the arc moves along the electrode and has a vibratory action thereon; of steadying means for the electrode, supported by the furnace walls at a distance from the point where the electrode enters the furnace.

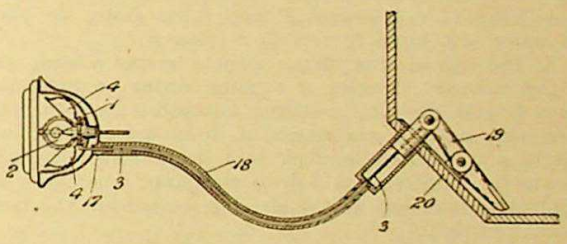
3. In an electric arc furnace, the combination with an electrode thereof in which the arc moves along the electrode and has a vibrating action thereon; of adjustable steadying means for the electrode, supported by the furnace walls at a distance from the point where the electrode enters the furnace.

4. In an electric arc furnace, the combination with an electrode thereof in which the arc moves along the electrode and has a vibrating action thereon; of adjustable water-cooled steadying means for the electrode, supported by the furnace walls at a distance from the point where the electrode enters the furnace.

5. The combination with a U-shaped electric furnace electrode along which the arc moves and has vibratory action thereon; of a metallic brace extending from the furnace wall to the electrode intermediate its end and the point where the electrode enters the furnace, the ends of said brace extending through the furnace wall to the outside thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,204,350. AUTO-LIGHT DIMMER. ANDREW A. FLORY, Grand Rapids, Mich., assignor to Grand Rapids Dimmer Company. Filed Dec. 9, 1915. Serial No. 66,005. (Cl. 240—45.)



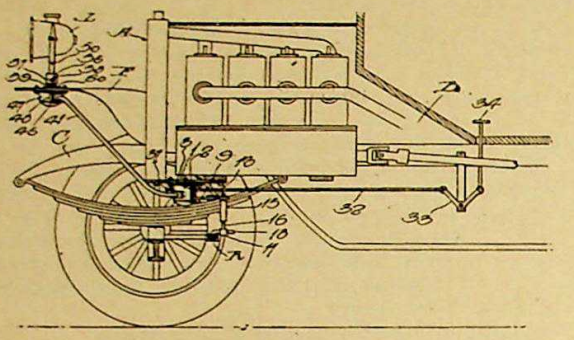
1. In combination, a light bulb, a dimmer construction including a sector pivotally mounted adjacent the bulb and adapted in one position to partially cover said bulb, a push rod mounted adjacent the bulb, means to move the rod back and forth and operative engagement between said rod and sector for turning the sector to operative position on forward movement of the rod.

2. In combination, a light bulb, a dimmer construction including a plurality of sectors pivotally mounted adjacent the bulb and adapted in one position to partially cover the bulb, a push rod movably mounted back of the bulb, a ring secured thereto, said ring having operative engagement with the sectors to close them on forward movement of the push rod, and means for moving the rod back and forth.

3. In combination, a light bulb, a dimmer construction movably mounted adjacent the bulb, a push rod mounted back of the bulb operating the dimmer construction to partially cover the bulb on forward movement of the rod, a cylinder, a piston on the rod located in the cylinder, a tubular connection to the cylinder, and means to alternately raise and lower the pressure in said tube above and below normal atmospheric pressure, substantially as described.

4. In combination, a light bulb, a dimmer construction, movably mounted adjacent the bulb, a push rod mounted back of the bulb operating the dimmer construction on forward movement of the rod to partially cover the bulb, a cylinder, a piston on the rear end of the rod located in the cylinder, a tubular connection to the cylinder, a cylinder connected to the opposite end of the tubular connection, a piston thereon, an operating rod secured thereto having a notch in one side thereof, a cap to the cylinder through which the rod passes, and having a part adapted to seat in said notch when the operating rod is moved to one position, and a coiled spring interposed between the piston and end of the cylinder tending to return the piston to normal position.

1,204,351. DIRIGIBLE HEADLIGHT. JOHN THORNTON GILMER, Fulton, Ala., assignor of one-half to Samuel Earle Airesman, Fulton, Ala. Filed Mar. 2, 1916. Serial No. 81,750. (Cl. 240—62.)



1. The combination with a vehicle having a lamp pivotally mounted thereon, of a plate having an arm extending therefrom, said arm being connected with the steering mechanism, a drum movable on said plate, a connection between said drum and lamp, means for connecting said drum and plate, whereby when said plate is moved by the steering mechanism the lamp will be turned, and means for disengaging said drum from the plate to allow said lamp to remain stationary.

2. The combination with a vehicle having a lamp pivotally mounted thereon, of a plate having an extensible arm formed thereon, a sliding connection between said arm and steering mechanism, a drum movable on said plate, a connection between said drum and lamp, and means for connecting said drum and plate, whereby when said plate is moved by the steering mechanism the lamp will be turned.

3. The combination with a vehicle having a lamp pivotally mounted thereon, of a plate having an extensible arm formed thereon, a cylinder secured thereto, a rod slidable therein, a finger on the vehicle steering rod and having said first mentioned rod connected thereto, a drum movable on said plate, a connection between said drum and lamp, and means for connecting said drum and plate, whereby when said plate is moved by the steering mechanism the lamp will be turned.

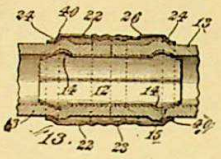
4. The combination with a vehicle having a lamp pivotally mounted thereon, of a plate having an arm extending therefrom, said arm being connected with the steering mechanism, a drum movable on said plate, a cylinder in said drum and connected thereto, means for connecting said cylinder to the plate, a connection between said drum and lamp, whereby when said plate is moved by the steering mechanism, the lamp will be turned, and means for disengaging said plate and cylinder to allow said lamp to remain stationary.

5. In a device of the class described, a drum connected with a lamp, a plate attached to the steering mechanism of a vehicle and movable therewith, means for engaging said plate and drum to rotate the lamp when the steering mechanism is operated, and means for disengaging said plate and drum to prevent the lamp from being rotated.

[Claims 6 to 16 not printed in the Gazette.]

1,204,352. HOSE-COUPLING. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-fourth to Fred C. Schoenthaler, St. Louis, Mo. Filed Mar. 13, 1915. Serial No. 14,278. (Cl. 137—28.)

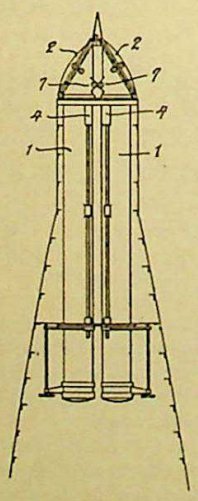
1. A hose coupling comprising a nipple having an enlarged annular shoulder tapering toward the end of the nipple to the internal diameter of the hose and adapted, when inserted into the hose, to expand the latter to form a distinct annular enlargement at a restricted point wholly remote from the coupled end of the hose and permit the hose to contract into engagement with the nipple and shoulder behind the latter, a pressed metal sleeve adapted to be applied over the hose and loosely over the enlargement thereon and having an annular flange formed to present an abrupt shoulder disposed to engage beyond and coact with the outer face of said annular enlargement to clamp the hose against the shoulder on the nipple, and a second pressed metal sleeve arranged for cooperation with the first named sleeve and with the nipple, said sleeves being free from contact with the hose except at said clamping point and having pressed threads forming a yieldable adjusting connection between them and adapting said first named sleeve and nipple to yieldingly clamp the hose and allow slight transverse movement or play of the sleeves relatively.



2. A hose mender comprising a nipple provided adjacent its ends with enlarged annular shoulders tapering toward the ends of the nipple to the internal diameter of the hose and adapted, when inserted into the hose sections, to expand the latter to form distinct annular enlargements at restricted points wholly remote from the meeting ends of said hose sections and permit the hose to contract into engagement with the nipple and shoulders behind the latter, a pair of pressed metal sleeves adapted to be applied over the hose and loosely over the enlargements thereon and having annular flanges formed to present abrupt shoulders disposed to engage beyond and coact with the outer faces of said annular enlargements to clamp the hose against the shoulders on the nipple, said sleeves being free from contact with the hose except at said clamping points and having pressed threads forming a yieldable connection between them and adapting said sleeves and nipple to yieldingly clamp the hose and allow slight transverse movement or play of the sleeves relatively.

3. A hose coupling comprising a nipple having an annular shoulder and adapted to be inserted into a hose, a sleeve adapted to be applied over the hose and having a flange formed and arranged to coöperate with said shoulder to clamp the hose on said nipple, and a split liner conforming to and applied against said flange, adapting the same to hose of different thicknesses.

1,204,353. TORPEDO-TUBE FOR SUBMARINES OR THE LIKE. MARLEY FOTHERINGHAM HAY and GERRIT EKAMA, The Hague, Netherlands. Filed Sept. 23, 1916. Serial No. 121,864. (Cl. 114—17.)



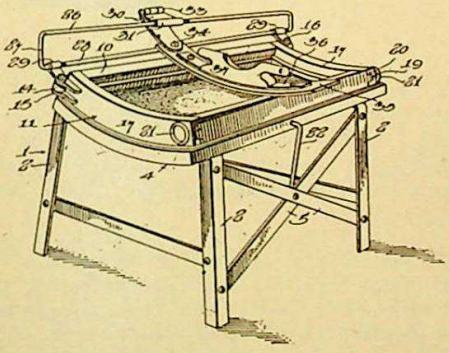
1. In connection with torpedo tubes for submarines and the like, a torpedo tube the outer end of which is contoured so that it approximately follows the line of the vessel, a hinged cover for same, and mechanism control-

ling the movement of this cover such that with the cover in either the open or closed position toggle action takes place so that no force can be transmitted from the cover, as described.

2. In connection with torpedo tubes for submarines and the like, a torpedo tube the outer end of which is contoured so that it approximately follows the line of the vessel, a hinged cover for same, and mechanism controlling the movement of this cover such that with the cover in either the open or closed position any reaction from the cover goes through the center of one of the axes on which the mechanism turns and thus no movement can be transmitted from the cover, as described.

3. In connection with torpedo tubes for submarines and the like, a torpedo tube the outer end of which is contoured so that it approximately follows the line of the vessel, a hinged cover for same, operating gear within the vessel, a vertical shaft turning in bearings on the tube, levers on the upper and lower ends of the shaft one connected to the operating gear and both connected each to a rod connected in turn to a lever one end of which is pivoted on a fixed pin at the mouth of the torpedo tube, a bent lever to one end of which the last mentioned lever is secured, and a pin on the cover to which the opposite end of the bent lever is secured, the levers and rods of this mechanism both above and beneath the torpedo tube being all in one plane, as described.

1,204,354. BLOCK-MOLD. WILBUR M. HICKMAN and ISAAC CANNIFF, Battle Creek, Mich. Filed July 13, 1916. Serial No. 109,121. (Cl. 25—43.)



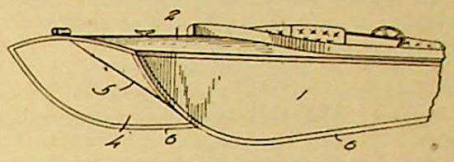
1. The combination with a block molding frame, of a track extending along one side of said frame, a slide rockably mounted on said track, and a trowel hingedly connected with said slide and adapted to be moved over the frame to trowel the plastic material therein.

2. The combination with a block molding frame, a track extending along one side thereof, and pivotally connected therewith, a slide member rockably and slidably mounted on said track, an attaching plate hinged to said slide member, and a trowel pivoted to said attaching plate and adapted to be moved over the aforesaid frame to trowel the plastic material therein.

3. The combination with a block molding frame, of a pair of bearings carried by one side thereof, a horizontal rod received rockably in said bearings, arms rising from said rod, a track rod carried by the upper ends of said arms, a slide member rockably and slidably mounted on said track rod, an attaching plate hinged to said slide member and a trowel pivoted to said attaching plate, said trowel being adapted to be moved over the aforesaid frame to trowel the plastic material therein.

4. The combination with a supporting frame including a horizontal bar and means for supporting a pallet in advance of said bar, of a block frame including a rear bar having brackets adjustably secured to the aforesaid horizontal bar to vary the angular relation of said rear bar in respect to the pallet, a pair of hinge plates contacting rockably with the rear side of said rear bar, bolts serving to lock said plates and secure them in adjusted position, a pair of end bars for the molding frame loosely hinged to said plates, and a detachable front bar for said molding frame.

1,204,355. MOTOR-BOAT. WILLIAM ALBERT HICKMAN, Boston, Mass. Filed Mar. 12, 1914. Serial No. 824,195. (Cl. 114—66.5.)



1. A motor boat comprising a hull formed of substantially parallel sides and a bottom divided into halves longitudinally of precisely similar dimensions, said halves having lateral upward inclinations from the chines and joined centrally forming two longitudinal continuous guiding surfaces in turning and twin surface propellers, each of said propellers coöperating with one of said guiding surfaces in steering the boat.

2. A hull in sled form having a stem extending athwartships and the chines curved upwardly at the bow end in the form of runners and its bottom divided into halves longitudinally of similar dimensions forming right and left sections and extending from the said stem to the stern and joined centrally above said chines throughout the length of the boat at a constantly changing angle most acute forward of midship.

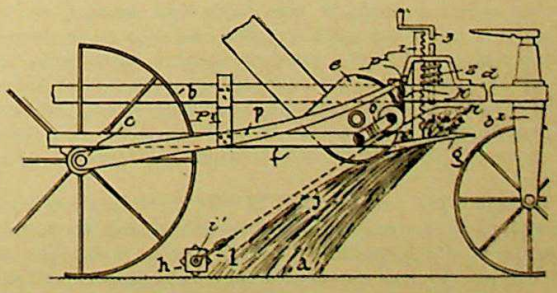
3. A hull of the hydroplane type having a stem extending athwartships at the top of the bow extremities of the sides and the latter curving downwardly and continuing to the stern, the bottom edges of said sides being joined from stem to stern by corresponding bottom boards or plates inclined upwardly from said sides and joined centrally thereby forming lateral and longitudinal inclines of said bottom from bow to stern.

4. A hull of the hydroplane type and square bow having its sides substantially parallel and its bottom formed in similar halves meeting centrally at varying angles and joined, said sides and said bottom at their joining forming acute angles of varying measurements from bow to stern.

5. A boat comprising a hull having planing surfaces along the bottom thereof and rudder plates hinged obliquely, one on each side of the boat and extending slightly to the rear of the stern transom, and means for operating said rudder plates.

[Claims 6 to 21 not printed in the Gazette.]

1,204,356. HARVESTING-MACHINE. CHARLES HOULDEN, Creek View, Victoria, Australia. Filed Dec. 15, 1915. Serial No. 67,026. (Cl. 56—33.)



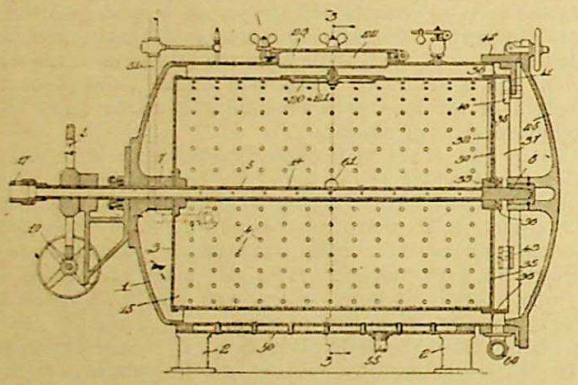
1. In a harvesting machine, the combination of a vertically adjustable comb mounted on the forward end of the harvester, fixed supports adjacent the comb, flexible connections suspended from the fixed supports, guides adjacent the comb over which the flexible connections pass, and a rotary ground roller mounted at the lower ends of the flexible supports, the flexible connections being longer than the vertical height of the comb above the ground,

whereby the butt ends of the stalks of the crop are held down.

2. In a harvesting machine, the combination of a frame, a comb carried by the frame, means for vertically adjusting the frame and comb, guide rollers supported on the frame, fixed supports on the machine, a ground roller in rear of the comb, chains connected at their upper ends to the fixed supports and passing over the guide rollers, bearings at the lower ends of the chains, said ground roller being mounted in said bearings, and means for adjusting the length of the chains.

3. In a harvesting machine, the combination of a comb, supports extending from the comb, guide rollers mounted on said supports, means for adjusting the supports, fixed supports on the machine, chains connected to the fixed supports and extending over the front of the guide rollers and to the rear thereof, means carried by the chains for adjusting the length thereof, and a ground roller mounted at the lower ends of the chains, said roller holding down the stalks of the crop when the comb is acting on said crop.

1,204,357. APPARATUS FOR TREATING FIBROUS MATERIALS. EUGENE D. JEFFERSON, Boston, Mass. Filed Jan. 13, 1915. Serial No. 1,960. (Cl. 92—18.)



1. Apparatus for treating fibrous materials, having in combination, a tank having an end closure, a cage rotatably mounted in the tank and having a removable end closure so that the materials in the cage may be emptied by opening the end closures of the tank and cage and rotating the cage.

2. Apparatus for treating fibrous materials having, in combination, a tank having a removable end closure, a cage rotatably mounted in the tank, a bearing mounted on the removable end closure for rotatably supporting one end of the cage, a removable end closure for the cage, a supplemental support for rotatably supporting the end of the cage when the removable end closure of the tank is removed.

3. Apparatus for treating fibrous materials having, in combination, a tank, a removable end closure for the tank, a bearing supported by the end closure, a cage rotatably mounted in the tank and having a trunnion journaled in the bearing to support one end of the cage, a roller mounted in the tank for engaging and rotatably supporting the free end of the cage when the end closure is removed, and a removable closure for the free end of the cage.

4. Apparatus for treating fibrous materials having, in combination, a horizontally disposed closed tank, a removable end closure for the tank having a bearing supported by the end closure, a cage rotatably mounted in the tank and having a trunnion journaled in the said bearing to support the end of the cage, one or more rollers engaging the free end of the cage at its periphery for rotatably supporting it when the end closure is removed, and a removable closure for the end of the cage.

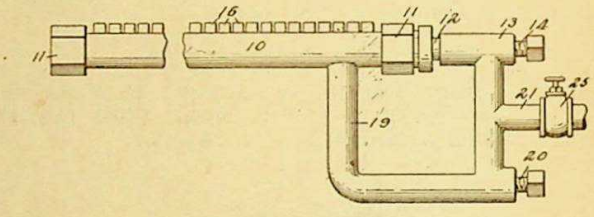
5. Apparatus for treating fibrous materials having, in combination, a cylindrical horizontally disposed closed tank, a removable head at one end of the tank, a bearing mounted in the center of the head, a cylindrical cage mounted in the tank and having a trunnion journaled in the bearing to support the end of the cage, an annular flange projecting from the free end of the cage, one or more rollers supported at the top of the tank and engaging the inner periphery of the flange for rotatably supporting the free end of the cage when the head of the tank is removed, and a removable end closure for the free end of the cage.

[Claims 6 to 8 not printed in the Gazette.]

1,204,358. MANUFACTURE OF BEVERAGE EXTRACTS. JOHN L. KELLOGG, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Co., Battle Creek, Mich., a Corporation of Michigan. Filed Aug. 17, 1916. Serial No. 115,505. (Cl. 99—11.)

A beverage extract, consisting of the extract of a mixture of a starch-bearing material, which has been first cooked until the starches are well dextrinized and then roasted, and caramelized saccharine material.

1,204,359. MULTIPLE BLAST-BURNER. WILLIAM W. KEMP and WILLIAM H. VAN HORN, Baltimore, Md. Filed Mar. 27, 1915. Serial No. 17,383. (Cl. 158—109.)



1. In a multiple blast burner, a plurality of tips, each having a blast and a pilot opening, a valve controlling the blast openings of all of said tips, a second valve controlling the pilot openings of all of said tips, a single main supply pipe supplying a gas to both of said valves, and a main valve controlling the flow of gas through the main supply pipe.

2. In a multiple blast burner, a manifold, a supply pipe within the manifold, a plurality of burner tips or casings mounted on the manifold and communicating therewith, a burner tube within each of said tips and communicating with the supply pipe, a burner plug in each of said tips at a distance below the upper end thereof and having a small central aperture communicating with said tubes and through which the blast supply issues, said plugs also having openings communicating through said tips with the manifold to provide pilot openings, a valve for said supply pipe for controlling the blast openings of all of said tips, and a second independent valve for said manifold for controlling the pilot openings of all of said tips.

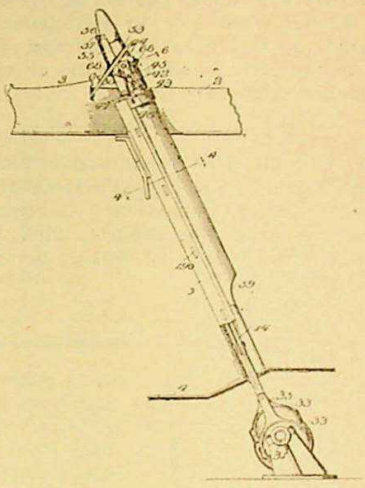
1,204,360. AMMUNITION-HOIST. JOSEPH A. KILLINGER and ANDREW W. BEAN, Washington, D. C. Filed Jan. 21, 1915. Serial No. 3,538. (Cl. 193—11.)

1. The combination with a shell guide including shell elevating means, of a tiltable cradle embodying reversely disposed shell rests, automatic operating means for locking the cradle at the limit of its throw, and means for releasing the locking mechanism.

2. In combination, a shell guide, brackets extending upwardly therefrom, a tilting shell cradle pivoted between the brackets, said cradle comprising oppositely extending shell rests disposed on opposite sides of the pivotal connection, means at the ends of the shell rests for engaging a shell to hold same in the cradle, and means for locking the cradle in alinement with the shell guide or in its tilted position.

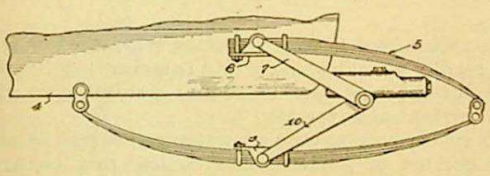
3. In combination, a shell guide, brackets extending upwardly therefrom, a tilting shell cradle pivoted between the brackets, said cradle comprising oppositely extending shell rests disposed on opposite sides of the pivotal con-

nection, means at the ends of the shell rests for engaging a shell to hold same in the cradle, a notched disk on



the cradle, and a spring actuated lock to engage the notches in the disk to hold the cradle in alinement with the shell guide or in tilted position.

1,204,361. SHOCK-ABSORBER. HERBERT L. KIMMELL, Los Angeles, Cal. Filed Jan. 25, 1916. Serial No. 74,120. (Cl. 21—105.)



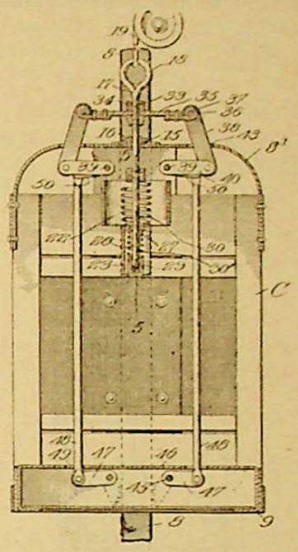
1. A shock absorber, comprising in combination an arm adapted to be secured to one of two relatively movable members, a casing fixedly secured to said arm, a cylinder open at its ends mounted in said casing, a head for one end of said cylinder provided with a valve seat, an inwardly opening valve disk mounted on said seat provided with a hollow stem open to a port through said disk, a valve check for said last mentioned port, an arm adapted to be secured to the other of said members geared to said piston to reciprocate the latter.

2. A shock absorber, comprising in combination, a cylinder, a conduit connecting the ends of said cylinder, a valve controlling said conduit having a reciprocating valve disk provided with a port, a check controlling said port, an arm fixedly secured to said cylinder, a piston having a rack mounted in said cylinder, a second arm secured to said cylinder for movement with respect thereto, and provided with a pinion meshing with said rack.

3. A shock absorber, comprising in combination a cylinder, a conduit connecting the ends of said cylinder, a valve controlling said conduit having a greater opening for flow of fluid in one direction than in the opposite direction, an arm fixedly secured to said cylinder, a piston having a rack mounted in said cylinder, a second arm secured to said cylinder for movement with respect thereto, and provided with a pinion meshing with said rack.

4. A shock absorber, comprising in combination, a cylinder, a conduit connecting the ends of said cylinder, a valve controlling said conduit having a greater opening for flow of fluid in one direction than in the opposite direction, an arm fixedly secured to said cylinder, a piston in said cylinder, a second arm secured to said cylinder for movement with respect thereto and geared to said piston to move the latter.

1,204,362. SAFETY LOCKING MECHANISM FOR ELEVATORS. JOSEPH KNEZIK, Madison, Ill. Filed Sept. 19, 1914. Serial No. 862,499. (Cl. 187—87.)



1. An apparatus of the class described comprising an elevator car, vertical guides therefor, a beam arranged between the sides of the car adjacent the top thereof, a receptacle formed by the beam, a casing arranged below the receptacle and secured to the beam and having an upper wall provided with an opening, a suspension bar slidably extending through the roof of the car and through the receptacle and into the casing, hoisting means connected with the suspension bar, a compression spring associated with the suspension bar within the casing and bearing at one end against the upper wall of the latter, a bracket rigidly supported adjacent the lower end of the receptacle, a block rigidly carried by the suspension bar above the bracket, a tension spring disposed within the receptacle and arranged between and connected to the bracket and block, a cross head adjustably carried by the suspension bar, and a plurality of gripping arms pivotally secured to the sides of the car and linkedly connected to the cross head and adapted to be rocked thereby into engagement with the said vertical guides, said gripping arms being arranged in pairs and bracing the vertical guides therebetween and adapted to engage the same at opposite sides.

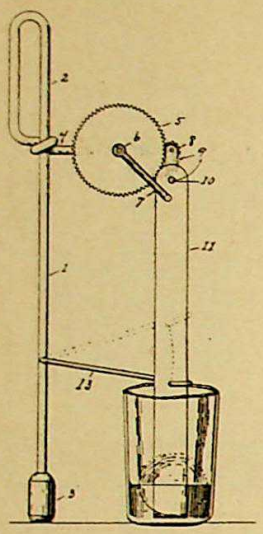
2. A device of the class described including an elevator car and guides relatively to which the car moves, a beam mounted on the car and providing a receptacle, a casing secured to the beam in axial alinement with the receptacle, a suspension bar slidably extending through the receptacle and casing, a compression spring associated with the suspension bar within the casing connected at one end with the bar and at its other end bearing against one end of the casing, a bracket carried by the receptacle, a tension spring arranged in the receptacle connected at one end with the bracket and at its other end with the bar, and gripping means carried by the car for engagement with the guides and actuated by the suspension bar.

1,204,363. EGG-BEATER, CREAM-WHIP, AND MIXER. ABRAHAM KNOBEL, San Diego, Cal. Filed June 1, 1914. Serial No. 842,183. (Cl. 259—144.)

1. A beater of the character described, comprising a beating mechanism including a beater blade and a standard therefor, said standard being spaced from said beater blade and provided with a single contacting point on its lower end which is adapted for free and tiltable engagement with a horizontal surface on the exterior of the receptacle in which the beater blade operates.

2. A beater of the character described, comprising a beating mechanism including a beater blade, and a standard therefor, said standard being spaced from said beater

blade and provided with a single contacting point on its lower end which is adapted for free, tiltable and rotatable engagement with a horizontal surface on the exterior of the receptacle in which the beater blade operates.



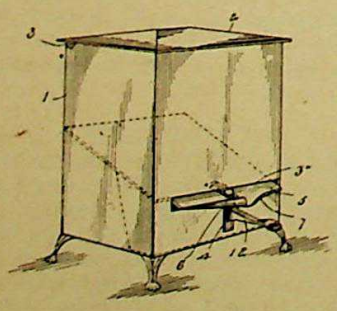
3. A beater of the character described, comprising a beating mechanism including a beater blade, and a standard therefor, said standard being spaced from said beater blade and provided with a single rounded contacting point on its lower end which is adapted for free, tiltable and rotatable engagement with a horizontal surface on the exterior of the receptacle in which the beater blade operates.

4. A beater of the character described, comprising a beating mechanism including a beater blade, and a standard therefor, said standard being spaced from said beater blade, formed of a single rod having its upper end bent into a loop to serve as a handle, and provided with a single contacting point at its lower end which is adapted for free and tiltable engagement with a horizontal surface on the exterior of the receptacle in which the beater blade operates.

5. A beater of the character described, comprising a beating mechanism including a beater blade, and a standard therefor, said standard being spaced from said beater blade and provided with an enlarged foot forming a single contacting point on its lower end, said foot being adapted for free and tiltable engagement with a horizontal surface on the exterior of the receptacle in which the beater blade operates.

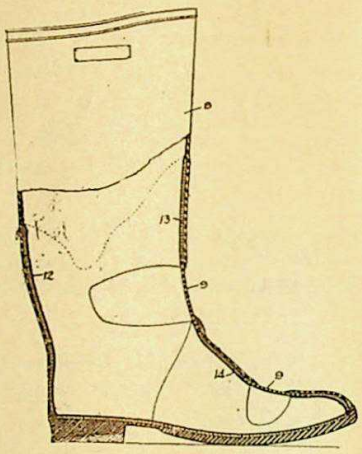
[Claims 6 to 9 not printed in the Gazette.]

1,204,364. SANITARY TOOTHPICK-HOLDER. OVIDE LAMOTHE and GEORGE LAMOTHE, Montreal, Quebec, Canada. Filed June 11, 1915. Serial No. 33,607. (Cl. 206—22.)



In a sanitary tooth-pick holder, in combination, a casing having a cover, a transverse slot in one side of said casing in the lower part thereof, a perpendicular slot intermediate of the length and downwardly extending from said transverse slot, a deflecting plate within said casing projecting outwardly through the said transverse slot and upturned so as to form a receiving plate, a portion of said plate being cut out, means to support said deflecting plate, a slot in said plate, a rocker pivotally mounted at one end in suitable bearings in the casing and a dent in its upper part, said upper portion of the rocker slightly projecting through said slot in the deflecting plate, a spring secured to said rocker at one end, the other end being rigid to the casing and a handle or arm projecting from said rocker to operate same.

1,204,365. RUBBER BOOT. CLIFFORD LEE, Naugatuck, Conn., assignor to The Goodyear's Metallic Rubber Shoe Co., a Corporation of Connecticut. Continuation in part of application Serial No. 849,871, filed July 9, 1914. This application filed Dec. 23, 1915. Serial No. 68,434. (Cl. 36—4.)



1. A rubber boot having a portion reinforced or stiffened, and a readily wrinkleable portion interrupting the stiffened portion of the boot and localizing wrinkling of the boot in said wrinkleable portion.

2. A rubber boot having a portion reinforced or stiffened, and a portion of predetermined undulating configuration interrupting the stiffened portion, and readily yieldable upon itself and adapted to localize and control wrinkling of the boot to occur longitudinally of the undulations of said portion.

3. A rubber boot having readily yieldable portions of predetermined configuration readily collapsible under stress to produce resultant wrinkles extending in predetermined directions, the boot being stiffened save at those points where said portions occur whereby wrinkling of the boot is localized in said portions.

4. A rubber boot having a readily wrinkleable portion, the boot being stiffened adjacent to said portion to localize wrinkling in said portion, said portion having a predetermined configuration adapted to control wrinkling of said portion to occur in predetermined directions.

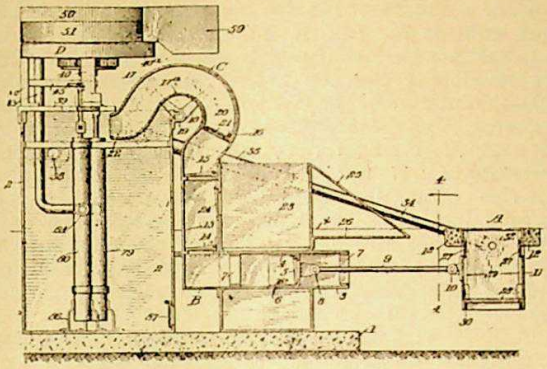
5. A rubber boot having a portion reinforced or stiffened, and permanent wrinkles interrupting the stiffened portion, said wrinkles readily collapsing upon themselves under stress while maintaining substantially their normal length and direction.

1,204,366. WAVE AND WIND POWER GENERATOR. ADOLPH LEPPERT, Brooklyn, N. Y. Filed June 14, 1915. Serial No. 33,887. (Cl. 253—4.)

1. Apparatus of the class described, comprising a reservoir, a pump having a stationary horizontally disposed cylinder, a vertically extending conduit through which water from said pump may be discharged into said reservoir, a float, and a pivoted link connection between said pump and float whereby the back and forth movement thereof, due to the ebb and flow of the water, serves to operate said pump, and whereby said float is free to rise and fall with the varying level of the water.

2. Apparatus of the class described, comprising a reservoir, a stationary pump, a conduit extending from the pump and discharging into the reservoir, a float, means whereby the said pump is operated by movements of the

float, and a catch tank arranged to discharge its contents into said conduit, between said pump and said reservoir.



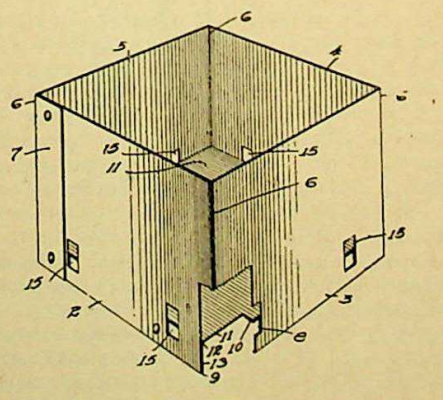
3. Apparatus of the class described, comprising a fixed reservoir, a stationary horizontally disposed pump, a float operatively connected therewith, a conduit for discharging water from said pump into said reservoir, a second pump carried by said float and operated by the vertical movement of the water thereunder, and a discharge pipe extending from said second pump to said reservoir.

4. In a device of the class described, the combination with a reservoir of a float, said float comprising a hollow boxlike body provided with check valves and having a vertically movable bottom, and a pipe connecting said body with said reservoir whereby vertical movements of said bottom coöperate with the said valves to force water through said pipe into said reservoir.

5. In a device of the class described, the combination with a reservoir of a pump arranged to deliver water into the same, a float, an operative connection between said float and pump whereby horizontal movements of the former operate the latter, said float being also capable of vertical movements and a pump carried by said float and operated by the vertical movements thereof, said second pump also delivering water into said reservoir.

[Claim 6 not printed in the Gazette.]

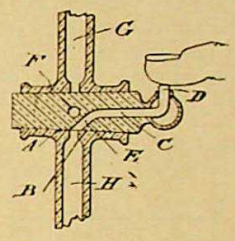
1,204,367. BERRY-BOX. LEWIS P. LORD, Minneapolis, Minn., assignor of one-third to F. G. Acomb, Minneapolis, Minn., and one-third to W. H. Killen, Appleton, Wis. Filed Nov. 13, 1915. Serial No. 61,298. (Cl. 229—16.)



1. A folding box comprising a blank of flexible material having parallel transverse score lines thereon at intervals to form a series of panels constituting the side walls of the box, and the panel at one end of the box having a lateral extension to form the bottom thereof, said panel also having longitudinal parallel score lines intersecting said transverse score lines forming a group of comparatively narrow flaps which are folded upwardly and inwardly when the box is set up and forming a support for the bottom panel, said flaps and said wall panels having openings therein which, when the box is folded, are partially above and partially below the bottom panel, for the purpose specified.

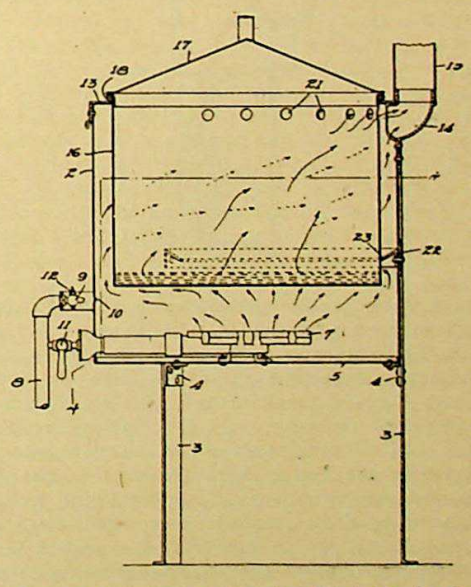
2. A berry box composed of a blank of flexible material having wall and bottom panels, said wall panels having flanges depending below said bottom panel and adapted to rest upon the top of the box next beneath, said flanges having openings therein to allow a circulation of air through the space between the bottom panel of one box and the berries in the box next beneath.

1,204,368. ANALYTICAL PIPETTE. ALEXANDER LOWY, New York, N. Y. Filed Mar. 27, 1916. Serial No. 87,114. (Cl. 23—3.)



In a pipette, in combination a chamber adapted to contain liquid, conduits communicating with opposite sides of said chamber; a stop-cock interposed in one of said conduits whereby a portion of said conduit connects said liquid chamber and said stop-cock, and a duct within said stop-cock adapted to establish communication between said connecting conduit and the atmosphere when said stop-cock is closed.

1,204,369. WASHBOILER. JOHN T. LUCAS, Minneapolis, Minn., assignor of one-third to L. F. Blyler and one-third to A. H. Rand, Minneapolis, Minn. Filed Dec. 28, 1915. Serial No. 69,039. (Cl. 126—350.)



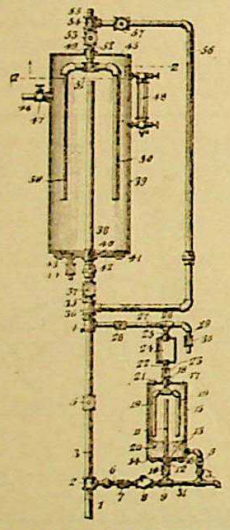
1. The combination, with a sheet metal jacket having an open top and closed bottom, of a gas burner mounted on said bottom, said jacket having a flange encircling its open top and provided near said flange with an exhaust opening, a pipe connection therefor, a boiler fitting within said jacket and seated on said flange and forming a substantially steam-tight joint therewith, the wall of said boiler having openings therein contiguous to said exhaust opening, for the purpose specified.

2. The combination, with a jacket having an open top and a gas burner mounted in the lower portion thereof, of a wash boiler fitting within said jacket, the walls of said boiler being spaced from the walls of said jacket, the upper walls of said jacket having an exhaust opening and pipe connection therefor and said boiler having a cover and a passage through which the steam may escape into the space between said boiler and jacket for delivery to said exhaust passage.

3. The combination, with a jacket and a burner mounted therein, of a boiler suspended within said jacket and spaced from said burner and the walls of the jacket, a deflector device interposed between said boiler and the walls of said jacket and extending partially around the boiler, compelling the flames and products of combustion from the burner to follow a tortuous path around said boiler, a vent pipe leading from said jacket, said boiler having discharge openings for the passage of steam to said vent pipe.

4. The combination, with a jacket and a burner mounted therein, of a boiler fitting within the open top of said jacket and depending to a point adjacent said burner, the upper walls of said jacket having an exhaust opening and a pipe connection therefor, the walls of said boiler having openings therein to allow the escape of steam into the space between said boiler and jacket, said jacket having means above said burner between it and said exhaust opening for deflecting the flames from said burner and compelling them to follow a tortuous path around said boiler.

1,204,370. FEED-WATER PURIFIER. WILLIAM E. MCCOMB, Cameron, Mo. Filed Nov. 5, 1915. Serial No. 59,795. (Cl. 210—19.)



1. A feed water purifier comprising a main pipe for receiving the water to be purified, a casing into which the water pipe enters to and discharges at a high point, an outlet for the casing communicating with the interior thereof at a low point and having multiple branches to slow up the flow of water from the high point of inlet to the low point of outlet within the casing, another pipe branched about the casing from the inlet to the outlet pipes thereof, another casing, a branch pipe from the main pipe entering the second casing and discharging thereinto at a high point, multiple pipe outlets leading from low points of the second casing and connected together and to the main pipe, and valves in the pipes for cutting the casings into and out of connection with the main pipe and for utilizing the casings singly or in series at the will of an operator.

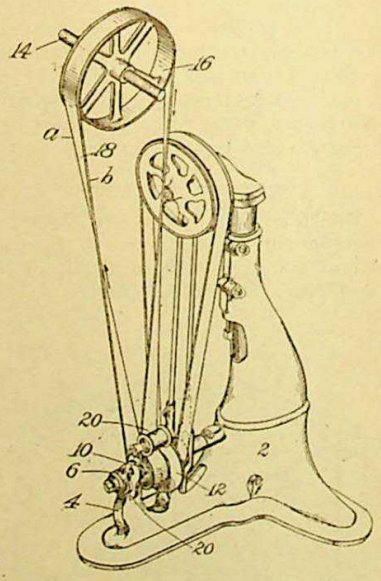
2. In a feed water purifying means, a supply pipe and an oil separator included therein and comprising a chamber with the main pipe entering the chamber and discharging thereinto at a high point, and a plurality of outlet pipes in the chamber for connection to the boiler, said outlet pipes communicating with the chamber at a low point therein and representing a cross-sectional area a plurality of times that of the main pipe.

3. In a means for purifying feed water, a casing, a pipe entering the casing and discharging thereinto at a high point of the casing, and a series of pipes in surrounding relation to the first-named pipe and communicating with the interior of the casing at a low point therein, said series of pipes having a common outlet, whereby water entering the casing through the inlet pipe is discharged thereinto at a high point and flows in a plurality of directions away from the inlet pipe to the entering ends of the surrounding series of pipes.

4. In a means for purifying feed water, a casing, a pipe entering the casing and discharging thereinto at a high point of the casing, and a series of pipes in surrounding relation to the first-named pipe and communicating with the interior of the casing at a low point therein, said series of pipes having a common outlet, whereby water entering the casing through the inlet pipe is discharged thereinto at a high point and flows in a plurality of directions away from the inlet pipe to the entering ends of the surrounding series of pipes, said casing being provided with a by-pass pipe extending from the inlet and outlet pipes around the casing and the inlet, outlet and by-pass pipes each having a valve therein for the control of the flow of water through the pipes.

5. In a feed water purifier, an oil separator comprising a casing, a feed water pipe entering the casing and opening therein at a high point of the casing, another feed water pipe leading from the casing with a series of branch pipes within the casing in surrounding relation to the first-named pipe and opening into the casing at a low point thereof, a branch pipe connecting the inlet and outlet pipes around the casing, a valve in the inlet pipe between the branch pipe and the casing, another valve in the outlet valve between the branch pipe and the casing, and a valve in the branch pipe.

1,204,371. BELT-CONTROLLING DEVICE. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 9, 1913. Serial No. 805,625. (Cl. 64—5.)



1. In power transmission mechanism, the combination with a pulley stand and bearing, a pulley mounted for turning movement in said bearing, a second pulley, and a belt connecting said pulleys, of a bracket having a three point contact with said bearing, one of said points being spaced longitudinally of the bearing from the other two points, clamping means for securing the bracket with its three points in firm contact with the bearing, and an idle pulley supported by the bracket and arranged to contact with the belt.

2. In power transmission mechanism, the combination with a pulley stand and bearing, a pulley mounted for turning movement in said bearing, a second pulley, and a belt connecting said pulleys, of a bracket having contact with said bearing at a plurality of points and also having a contact point on the stand, clamping means having provision for adjustment of the bracket to bring the several points into firm contact with the bearing and stand, and an idle pulley supported by the bracket and arranged to contact with the belt.

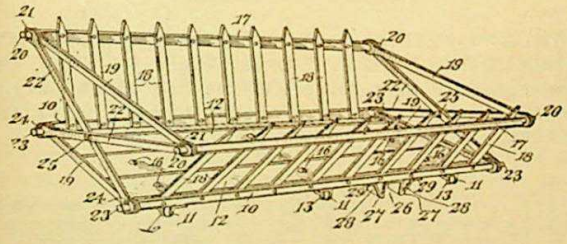
3. In power transmission mechanism, the combination with pulleys and a connecting belt, of a belt adjusting device comprising a supporting bracket, an arm mounted to turn upon said bracket to different positions of adjustment, and a belt tightening pulley carried by said arm, said bracket and arm being formed to present opposed contact members one of which is provided with a plurality of teeth or corrugations arranged in a continuous circular series, said other member having a plurality of separated groups of teeth arranged for engaging said teeth on the first named member in different positions of adjustment of said arm.

4. In power transmission mechanism, the combination with pulleys and a connecting belt, of a belt adjusting device comprising a supporting bracket, an arm mounted to turn upon said bracket to different positions of adjustment, a belt tightening pulley carried by said arm, said bracket and arm being formed to present opposed contact members one of which is provided with a plurality of teeth or corrugations arranged in circular series about the axis of turning movement of said arm, said other member having means for engaging said teeth at three or more locations symmetrically spaced apart about said axis at relatively wide intervals, and means for clamping said members together in adjusted position.

5. In power transmission mechanism, the combination with pulleys and a connecting belt of which one edge portion is of greater length than the other edge portion, of means arranged to bear upon said longer portion of the belt to tighten said portion without affecting materially the tension of the opposite edge of the belt, so as to correct the tendency of the belt to run unevenly upon the pulleys.

[Claims 6 to 15 not printed in the Gazette.]

1,204,372. HAY-RACK. JOHN A. MALCIK, Cistern, Tex. Filed Nov. 6, 1915. Serial No. 60,004. (Cl. 21—74.)

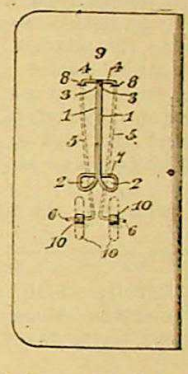


1. A hay rack comprising upper and lower angle side bars, angle cross-bars joining the lower side bars, said lower side bars and said cross bars having their horizontal flanges abutting and having their opposite flanges extending respectively upward and downward, bracing clamps securing the overlapping portions of said horizontal flanges together and engaging the vertical flanges of the cross bars for supporting the same, a plurality of slats placed between said lower side bars and resting upon the cross bars, and an open body rising from said lower side bars.

2. A hay rack comprising side bars of angle iron having their horizontal flanges extending inwardly, cross bars of angle iron having their horizontal flanges resting against the lower faces of said side bars, means for securing said horizontal flanges together at their abutting portions, pales rising from the vertical flanges of said side bars and diverging outwardly, upper side bars of angle iron construction secured at their depending flanges across the outer sides of said pales near the upper ends thereof and having their horizontal flanges extending outwardly, and studs extending from the extremities of said upper and lower side bars, end bars joining the opposite ends of said upper side bars, and cross-braces joining the opposite ends of the upper and lower side bars.

3. In a hay rack, longitudinal angle bars having horizontal flanges, cross bars of angle form having their horizontal flanges abutting the horizontal flanges of said longitudinal bars, the vertical flanges of said cross bars extending downwardly and having notches in their lower edges immediately beneath the horizontal flanges of said longitudinal bars, hook-bolts passing through the abutting horizontal flanges of said longitudinal and cross bars and having the hooks thereof engaging in the notches of said vertical flanges, said bolts passing upwardly against the inner faces of said vertical flanges to reinforce the same, and binding nuts upon the upper ends of said hook-bolts adapted to draw said horizontal flanges together and bind the hooks in said notches.

1,204,373. CLIP. ADAM MIEDEN, Reno, Nev. Filed June 5, 1915. Serial No. 32,434. (Cl. 24—261.



1. A clip comprising a front member, a rear member, and a bridge joining the upper ends of the members, said members and bridge comprising a single length of wire returned upon itself to provide the front member having a pair of strands, said strands being rolled laterally and oppositely from the lower end of the front member to provide lateral loops thereat which are joined across the inner face of the front member, the strands being turned inwardly at right angles from the top of the front member to provide the bridge, and being diverged laterally and oppositely from the rear end of the bridge to provide a transverse shoulder across the top of the rear member, the strands of the rear member extending downwardly from the opposite ends of said shoulder.

2. A clip comprising a front member, a rear member, a bridge joining the upper ends of said members, said members and bridge comprising a single length of wire returned upon itself to provide the front member having a pair of strands, the strands of the front member extending in contact throughout substantially the length of the front member and being rolled laterally and oppositely from the lower end of the front member to provide loops at the opposite sides thereof which are joined across the inner face of the front member, the strands at the upper end of the front member being turned inwardly at right angles to provide the bridge, and being diverged laterally and oppositely from the rear end of the bridge to provide a transverse shoulder across the top of the rear member, the strands of the rear member converging downwardly from the opposite ends of said shoulder to a point below the lower end of the front member and then being bent laterally and oppositely from said point, said rear member being bowed toward the front member, and means engaging the lower ends of said converging strands to secure the same from spreading and to hold the rear member in place.

1,204,374. VULCANIZING PROCESS. HAROLD R. MURDOCK, Naugatuck, Conn., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed May 4, 1916. Serial No. 95,359. (Cl. 18—53.)

1. The process of treating rubber for vulcanization, which comprises adding vulcanizing material thereto containing lead and sulfur, and a reactive material adapted to produce a light-colored water-insoluble compound with said lead upon vulcanization, and vulcanizing the mixture.

2. The process of treating rubber for vulcanization, which comprises adding vulcanizing material thereto con-

taining lead and sulfur, and a reactive material adapted to produce light-colored water-insoluble compounds with the lead and sulfur upon vulcanization, and vulcanizing the mixture.

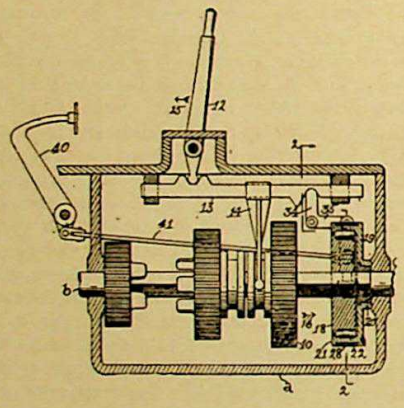
3. The process of treating rubber for vulcanization, which comprises adding vulcanizing material thereto containing lead and sulfur, and a substance having an acid radical adapted to form a light-colored water-insoluble salt with lead upon vulcanization, and vulcanizing the mixture.

4. The process of treating rubber for vulcanization, which comprises adding vulcanizing material thereto containing lead and sulfur, and a reactive substance comprising a metal and an acid radical adapted to form with the sulfur and lead respectively a light-colored water-insoluble sulfid and a light-colored water-insoluble lead salt, and vulcanizing the mixture.

5. The process of treating rubber for vulcanization, which comprises adding vulcanizing material thereto containing lead and sulfur and zinc sulfate, said zinc sulfate being adapted to convert the lead sulfid formed upon vulcanization into lead sulfate and zinc sulfid, and vulcanizing the mixture.

[Claims 6 to 10 not printed in the Gazette.]

1,204,375. SAFETY DEVICE FOR AUTOMOBILES. JAMES H. NEAL, Cambridge, Mass. Filed May 20, 1916. Serial No. 98,999. (Cl. 21—8.)

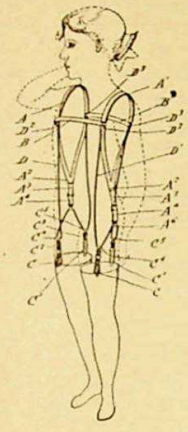


1. The combination with a motor vehicle provided with wheels and with means for reversing the movement of said vehicle, of a safety device rendered effective by reverse movement of the vehicle to prevent continued movement in the reverse direction, means actuated by said reversing means for rendering said safety device inoperative to permit reversal of the vehicle at the will of the operator, and means for restoring said safety device to its operative condition with the said reversing means in its reversing position.

2. The combination with a motor vehicle provided with wheels and with a device for controlling the speed of the vehicle, and with a device for controlling the application of the motive power to the rear wheels of the vehicle, of a safety device rendered effective by the reverse movement of the vehicle to prevent continued movement in the reverse direction, means for operatively connecting said safety device with said speed controlling device to enable said safety device to be rendered inoperative when the speed controlling device is actuated to effect reversal of the vehicle at the will of the operator, and means operatively connected with the power applying device for restoring said safety device to its operative condition with the speed controlling device in its reversing position.

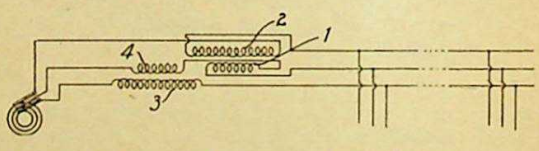
3. The combination with a motor vehicle provided with wheels, and with means for reversing the movement of said vehicle, of a safety device rendered effective by reverse movement of the vehicle to prevent continued movement in the reverse direction, means actuated by said reversing means for rendering said safety device inoperative to permit reversal of the vehicle at the will of the operator, and means separate from said reversing means for restoring said safety device to its operative condition.

1,204,376. HOSE-SUPPORTER. NETTIE ANNE NEWKIRK, Roberts, Mont. Filed Mar. 3, 1916. Serial No. 81,931. (Cl. 241—4.)



A hose supporter comprising straps adapted to lie over the shoulders of the wearer, guides carried by the straps and adapted to lie at the side of the hips, cross straps connecting the shoulder straps together, cords connected with the shoulder straps and having intermediate portions trained through the guides, and hose engaging elements loosely mounted on the cords beyond the ends of the guides and adapted to lie adjacent the anterior and posterior sides of the legs.

1,204,377. POLYPHASE-CURRENT-LIMITING REACTANCE-COIL. JOHN F. PETERS, Edgewood, Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 3, 1914. Serial No. 848,794. (Cl. 171—242.)



1. The combination with a plurality of conductors comprising a polyphase system, of reactance coils therefor which are so positioned with respect to one another as to be mutually inductively related, one of said conductors being connected in circuit with a plurality of said coils, and each of the other conductors being connected in circuit with a single coil, a coil associated with said first conductor being disposed immediately adjacent to one of the other of said coils.

2. The combination with a plurality of conductors for polyphase currents, of power-limiting reactance coils therefor which are so disposed with respect to one another as to be mutually inductively related, one of said conductors being connected in circuit with a plurality of said coils, each of which is mutually inductively related to one of the coils singly connected in circuit with the other of said conductors.

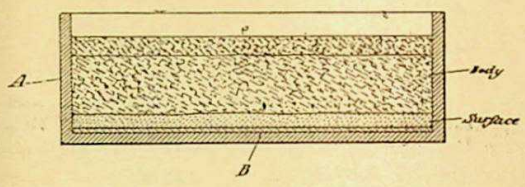
3. The combination with a plurality of conductors for polyphase currents, of power-limiting reactance coils therefor which are so disposed with respect to one another as to be mutually inductively related, one of said conductors being connected in series circuit with a plurality of said coils, and each of the other conductors being connected in series circuit with a single coil which is inductively related to a single coil in circuit with one of said other conductors, and to one of the coils inserted in said first conductor.

4. The combination with a plurality of conductors for polyphase currents, of power-limiting reactance coils therefor which are superposed upon, and spaced from, one another in order to be mutually inductively related, one of said conductors being connected in series circuit with the upper and lower coils, and each of the other of said conductors being connected to an intermediate coil.

5. The combination with a plurality of conductors for polyphase currents, of power-limiting reactance coils therefor which are so superposed upon one another as to be mutually inductively related, one of said conductors being connected in series circuit with a plurality of said coils and each of the other conductors being connected in series circuit with a single coil which is interposed between one of the single coils inserted in one of said other conductors and one of the coils inserted in said first conductor.

[Claims 6 to 14 not printed in the Gazette.]

1,204,378. PROCESS OF MARBLEIZING CEMENT. FRANK SPENCER, Louisville, Ky. Filed Mar. 31, 1916. Serial No. 88,097. (Cl. 18—48.8.)

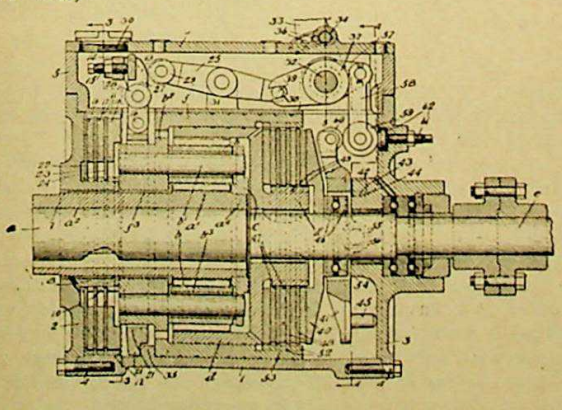


1. The process of producing an article having a polished and hard-surfaced finish closely simulating marble from plastic material having Portland cement as its base, which consists in molding the article in face contact with a polished surface coated with a solution containing oxalic acid.

2. The process of producing an article having a polished and hard-surfaced finish closely simulating marble from plastic material having Portland cement as its base, which consists in molding the article in face contact with a polished surface coated with a solution containing oxalic acid, and vibrating the material during a predetermined portion of its period of formation.

3. The herein described process of manufacturing articles from plastic material having Portland cement as its base, which consists in providing a mold having a face forming surface, coating said surface with a solution containing oxalic acid, shaping the plastic material in said mold to the desired form and against said surface, allowing the plastic material to stand and settle, then covering the same with a backing, and then removing the article thus formed.

1,204,379. REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping & Plating Company, Taunton, Mass., a Corporation of Massachusetts. Filed Oct. 19, 1914. Serial No. 867,332. (Cl. 74—34.)



1. In a reversing-gearing, the combination of a drive-shaft, a driven-shaft, a clutch-mechanism for forward drive, gearing including brake-mechanism and a pinion-carrier connecting said shafts for reverse drive, actuating-means for said mechanisms, a casing inclosing said mechanisms and their actuating-means, said brake-mechanism comprising a plurality of axially movable plates, one set of said plates being held against rotation by said casing, and means extending laterally from said pinion-carrier and connecting the other set of plates, substantially as described.

2. In a reversing-gearing, the combination of a drive-shaft, a driven-shaft, a spur-gear, a pinion-carrier mounted upon the driving-shaft, pinions carried thereby meshing with said spur-gear, an internal-gear carried by the driven-shaft and in mesh with said pinions, a brake-mechanism for stopping the pinion-carrier from rotation, said brake-mechanism comprising a plurality of axially movable clutch-plates, one set of clutch-plates being held against rotation, pins extending laterally from the pinion-carrier and projecting within openings formed with the other set of clutch-plates, a clutch-mechanism for connecting the pinion-carrier with the internal-gear and means for operating the brake-mechanism and clutch-mechanism, substantially as described.

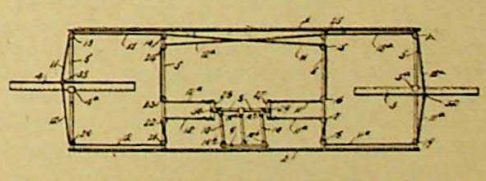
3. A reversing-gearing having clutch-mechanism for forward drive, and brake-mechanism for reverse drive, separate actuating-means for said mechanisms, a casing inclosing said mechanisms, and their actuating-means, and an operating-lever arranged outside of the casing with which both actuating-means are connected, substantially as described.

4. In a reversing-gearing, the combination of a drive-shaft, a driven-shaft, gearing connecting said shafts including brake-mechanism for reverse drive, and clutch-mechanism for forward drive, a casing inclosing said gearing, an operating-lever arranged outside the casing, and means arranged within the casing, for operating the brake-mechanism and the clutch-mechanism, said means being connected with said operating-lever and adapted to be operated by it, substantially as described.

5. A reversing-gearing having clutch-mechanism for forward drive and brake-mechanism for reverse drive, separate actuating-means for said mechanisms, a casing inclosing said mechanisms and their actuating-means, a rock-shaft having its bearings in the casing, means operatively connecting both actuating-means with said rock-shaft, and an operating lever arranged outside of the casing which is connected with said rock-shaft, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,204,380. FLYING-MACHINE. GLENN H. CURTISS, Hammondsport, N. Y., assignor to Curtiss Aeroplane & Motor Corporation, a Corporation of New York. Filed June 23, 1910. Serial No. 568,425. (Cl. 244—29.)



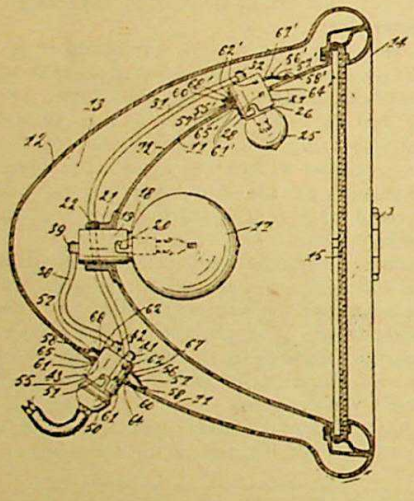
1. A flying machine comprising a balancing surface at each side thereof the angle of incidence of which may be varied, a two-part connection for operating said surfaces, an equalizing member interpolated in the connection for moving one of said surfaces up and the other down, a second equalizing member interpolated in the connection for moving said first mentioned surface down and the other up, said members being capable of their equalizing motion in response to varied air pressure on said surfaces so that said surfaces may move in the same direction, and means for bodily moving said members in the same direction to move said surfaces in opposite directions.

2. A flying machine comprising a balancing surface at each side thereof the angle of incidence of which may be varied and which is pivoted forward of its center of pressure, a two-part flexible connection for operating said surfaces, an equalizing member interpolated in the con-

nection for moving one of said surfaces up and the other down, a second equalizing member interpolated in the connection for moving said first mentioned surface down and the other up, said members being free for equalizing motion in response to varied air pressure on said surfaces, and common means for moving said members bodily in a predetermined direction to move said surfaces in opposite directions.

3. A flying machine comprising a balancing surface at each side thereof, the angle of incidence of which may be varied, a flexible two-part connection for operating said surfaces, a pivoted equalizing member interpolated in said connection for moving one of said surfaces up and the other down, a second pivoted equalizing member interpolated in said connection for moving said first mentioned surface down and the other up, said members being capable of their equalizing motion in response to varied air pressure on said surfaces so that said surfaces may move in the same direction and said members oppositely, and common means for bodily moving said members in the same direction to move said surfaces in opposite directions.

1,204,381. SECURING MEANS FOR ELECTRIC SOCKETS. EUGENE A. KUEN, Cincinnati, Ohio, assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 26, 1915. Serial No. 42,092. (Cl. 240—41.)



1. Means for securing electric terminal sockets in place, comprising a lamp-member, a securing-member, a socket-member, and resiliently acting means about said socket-member, said socket-member and said lamp-member and securing-member provided with retaining connections held in locking relation by the resilient action of said resiliently acting means, said resiliently acting means located between the retaining connections between said socket-member and said lamp-member and securing-member respectively, and said retaining connections limiting relative rotary movements between said socket-member, lamp-member and securing-member.

2. In means for securing an electric terminal socket to a lamp-member, the combination with a lamp-member, of a securing-member having spread contact-parts arranged to coact with a convex surface and with a concave surface, a socket-member, means between said socket-member and said lamp-member and securing-member for limiting relative movement between said lamp-member and securing-member lengthwise of said socket-member, and continually acting resilient means for exerting force in the direction of said movement.

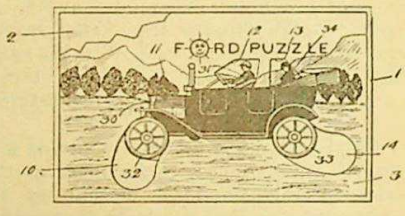
3. In means for securing an electric socket to a lamp, the combination of a lamp-member, a spring-plate, and a socket-member received in said lamp-member and spring-plate, said socket-member and said lamp-member and spring-plate provided with coacting shoulders, and said spring-plate acting to press said coacting shoulders together.

4. In means for securing an electric terminal socket to a lamp, the combination of a lamp-member, a plate provided with diverging spring-feet projected toward said lamp-member, and a socket-member extending through said lamp-member and said plate, said socket-member provided with a pair of sets of shoulders, said sets of shoulders spaced apart lengthwise of said socket-member, said lamp-member and said plate provided with shoulders coacting with said respective sets of shoulders, and said spring-feet acting to separate said plate and lamp-member for causing coaction between the shoulders thereon and the shoulders on said socket-member.

5. In means for securing an electric socket to a lamp, the combination of a lamp-member formed of a curved sheet of metal having a concave side and a convex side, an aperture therethrough, a plate provided with an aperture and with diverging spring-feet extending divergingly from the apertured portion of said plate toward said lamp-member, and a socket-member in said apertures provided with spaced-apart shoulders, said lamp-member and plate provided with coacting shoulders, and said spring-feet arranged to press said apertured portion of said plate and said lamp-member in separated relation from either side of said lamp-member.

[Claim 6 not printed in the Gazette.]

1,204,382. PUZZLE. ALEXANDER I. MITCHELL, Boston, Mass., assignor to National Toy Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 21, 1916. Serial No. 85,715. (Cl. 46—41.)



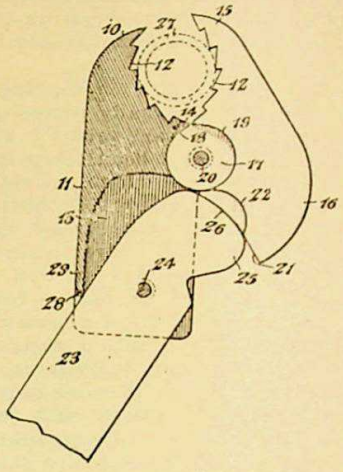
1. The puzzle herein described comprising a container, a stationary apertured plate having a design thereon, a plurality of movable-members arranged beneath said plate bearing fragments of the design which is arranged on the stationary plate, said movable-members being adapted to move in various ways upon tilting movements of the container, and to be brought into position to present their design fragments beneath the apertures of the stationary plate to complete the design, upon a rotative movement of the container.

2. The puzzle herein described comprising a container, a stationary apertured member having a design thereon, a plurality of pivoted members arranged beneath said stationary member, each pivoted member having a design-carrying arm and a weighted-arm, said pivoted members being adapted to move in various ways upon tilting movements of the container, and to be brought into position to present the design fragments on the design-carrying arms beneath the apertures of the stationary member upon a rotative movement of the container.

1,204,383. WRENCH. WALDEMAR HUGO SPANIER, Grand Harbor, N. D. Filed Mar. 31, 1916. Serial No. 88,055. (Cl. 81—91.)

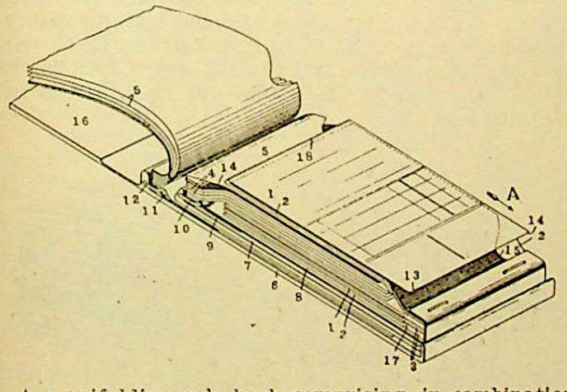
A wrench comprising an inner jaw provided with an inwardly extending hollow shank open at its inner end and at its inner edge, and having spaced apart edgewise extending ears in its inner edge, a handle lever pivoted in said hollow shank and having an edgewise extending lobe projecting through said open inner edge of the shank, an outer jaw having an inwardly extending shank provided with a projecting lug at its inner edge for engagement between said ears, and a pivot passing through the ears and the lug to pivotally connect the jaws, the shank of the outer jaw having a flat abutting face at its inner edge for engagement against the inner edge of the inner shank, and having a concavity in its abutting face to

receive the lobe and to provide a cam surface in the concavity for the lobe to work against, said handle lever being adapted to be swung in said hollow shank to move the lobe outwardly against the said cam surface of the concavity to force the shanks apart and close the jaws, said lobe being adapted to work out of the concavity and



inwardly onto said abutting face to accelerate the advancement of the outer jaw, the lower edge of the outer edge wall of the inner shank comprising a stop for engagement with the hand lever to limit the outward swinging of the same.

1,204,384. MANIFOLDING SALES-BOOK. GEORGE E. DOUGHTY, New York, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario, Canada. Filed Mar. 8, 1916. Serial No. 82,791. (Cl. 11—23.)



1. A manifolding salesbook comprising, in combination, a binder, three pads including a pad of folded leaves, said pads being connected at one end of each to the binder so that the leaves of the folded-leaf pad extend from their point of connection toward the point of connection of the leaves of the other pads, the length of the leaves of said pad being such as to permit their superposition, whereby a folded leaf may be superposed with a leaf of each of said other pads, and means whereby an impression made on the uppermost of said four superposed leaves will be copied on the three underlying leaves thereof.

2. A manifolding salesbook comprising, in combination, a binder, three pads including a pad of folded leaves, said pads being connected at one end of each to the binder so that the leaves of the folded-leaf pad extend from their point of connection toward the point of connection of the leaves of the other pads, the length of the leaves of said pads being such as to permit their superposition, whereby a folded leaf may be superposed with a leaf of each of said other pads, a transfer sheet adapted to lie between the plies of said folded leaves, and a double faced transfer sheet adapted to lie between the said superposed leaves of said other pads.

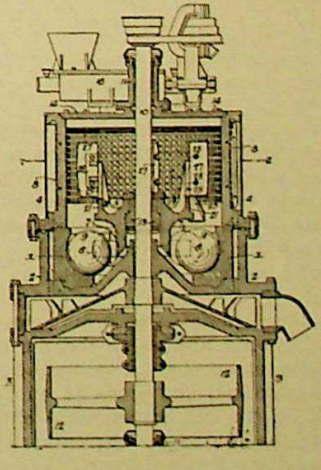
3. A manifolding salesbook comprising, in combination, a binder, three pads including a pad of folded leaves, said pads being connected at one end of each to the binder so that the leaves of the folded-leaf pad extend from their point of connection toward the point of connection of the leaves of the other pads, the points of connection between said respective other pads and said binder being different distances from the point of connection of the folded-leaf pad, the length of the leaves of said pads being such as to permit their superposition, whereby a folded leaf may be superposed with a leaf of each of said other pads, and means whereby an impression made on the uppermost of said four superposed leaves will be copied on the three underlying leaves thereof.

4. A manifolding salesbook comprising, in combination, a binder, three pads including a pad of folded leaves and a pad of tissue leaves, said pads being connected at one end of each to the binder so that the leaves of the folded-leaf pad extend from their point of connection toward the point of connection of the leaves of the other pads, the points of connection between said respective other pads and said binder being different distances from the point of connection of the folded-leaf pad, the point of connection of the tissue leaf pad being more remote, the length of the leaves of said pads being such as to permit their superposition, whereby a folded leaf may be superposed with a leaf of each of said other pads, and means whereby an impression made on the uppermost of said four superposed leaves will be copied on the three underlying leaves thereof.

5. A manifolding salesbook comprising, in combination, a binder, three pads including a pad of folded leaves and a pad of tissue leaves, said pads being connected at one end of each to the binder so that the leaves of the folded-leaf pad extend from their point of connection toward the points of connection of the leaves of the other pads, the points of connection between said respective other pads and said binder being different distances from the point of connection of the folded-leaf pad, the point of connection of the tissue leaf pad being more remote, and both of said points of connection being beyond the folded ends of the folded-leaf pad, the length of the leaves of said pads being such as to permit their superposition, whereby a folded leaf may be superposed with a leaf of each of said other pads, and means whereby an impression made on the uppermost of said four superposed leaves will be copied on the three underlying leaves thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,204,385. PULVERIZER. FREDERICK B. FRANKS, Bath, Pa. Filed July 20, 1916. Serial No. 110,344. (Cl. 83—45.)



1. The combination in a pulverizer, of a frame; a screen; a fixed grinding ring; a driven shaft; a yoke carried by the shaft; grinding balls arranged to be driven by the yoke and to travel in contact with the ring; vertically extending arms projecting upwardly from the yoke; and fans secured to the said arms, the space

between the arms being open for the free passage of the material to the screen.

2. The combination in a pulverizer, of a frame; an annular screen; a fixed grinding ring below the screen; a driven shaft; a yoke carried by the said shaft; balls propelled over the grinding ring by the yoke; upwardly projecting arms; fan blades secured to the arms, the space between the arms being entirely open and the upper portion of the pulverizer inclosed by the screen being free of obstructions with the exception of the arms of the yoke so that as the material enters the pulverizer the fine particles will be carried immediately to the screen by the centrifugal action of the blades.

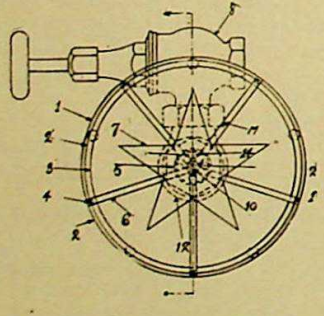
3. The combination in a pulverizer, of a frame; an annular screen; a fixed grinding ring; a driven shaft; a yoke carried by the said shaft, said yoke havig integral arms; pushers mounted on the arms; balls propelled over the grinding ring by the pushers and arranged to travel in contact with the ring; integral brackets projecting from the yoke; and fans secured to the brackets.

4. The combination in a pulverizer, of a frame; an annular screen; a grinding ring mounted on the frame; a vertical shaft; a yoke carried by the shaft having integral arms; pushers secured to the arms; balls mounted in advance of the pushers and arranged to travel against the grinding ring, said yoke having a series of integral vertical arms provided with brackets; a series of integral inclined brackets; and fan blades secured to both sets of brackets.

5. A yoke for a pulverizer made as an integral structure and having integral vertical arms and inclined brackets to which the fan blades are secured, the space between the vertical arms being open for the free passage of the material.

[Claim 6 not printed in the Gazette.]

1,204,386. INDIVIDUAL THERMOSTATIC CONTROLLER FOR RADIATORS. EDWARD S. HALSEY, Philadelphia, Pa. Filed July 21, 1914. Serial No. 852,160. (Cl. 236—6.)



1. In combination with a heating radiator and the regulating valve thereof, a thermostat mounted on said valve and connected thereto to open and close the same in accordance with the temperature changes, said thermostat being located at one side of the valve out of the path of heated air currents rising from the valve, and a shield repellant to radiant heat arranged between the thermostat and valve, whereby the thermostat is acted upon only by air having substantially the average room temperature and influence of the heated valve is substantially excluded.

2. An individual radiator control comprising in combination a valve body and valve therein, a thermostatic cell, an outrigger or support of ventilated skeleton structure mounting said cell and mounted on the valve body, arranged to hold the cell at one side of the valve out of the path of the heated air currents rising therefrom, operating connections between the cell and valve for opening and closing the latter in response to movements of the former caused by temperature changes, and a shield resistant to radiant heat interposed between the cell and valve body.

3. An individual radiator control comprising in combination a valve body and valve therein, a thermostatic cell, an outrigger or support of ventilated skeleton structure mounting said cell and mounted on the valve body, arranged to hold the cell at one side of the valve out of the path of heated air currents rising therefrom, operating connections including a motion transmitting member of heat-insulating material between the cell and valve for opening and closing the latter in response to movements of the former caused by temperature changes, and a shield resistant to radiant heat interposed between the cell and valve body.

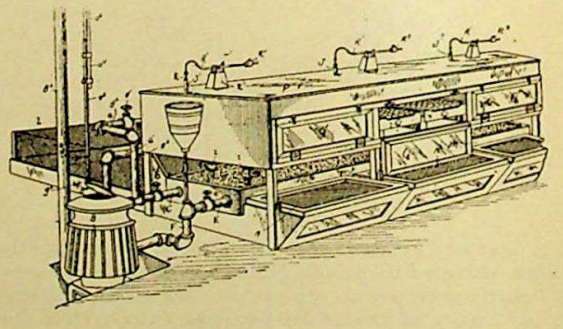
4. In an integral, composite, temperature regulating radiator supply valve, an internally ported valve body; a bonnet closing one side of said valve; a non-heat-conducting out-rigger fixed to said bonnet supporting a sensitive, atmospheric thermic cell out to one side from said valve and its rising heat currents; an efficient radiant heat shield for said thermic cell carried by said outrigger between the cell and the valve; a throttling disk within said body; and a packless friction eliminating device communicating the closing pressure from said cell to said disk through and by means of a flexible diaphragm 18, hermetically sealed inside of said bonnet.

5. In an integral, composite temperature regulating radiator valve, an internally ported valve body; a detachable valve bonnet closing one side of said body; a non-heat-transferring holder carried by said bonnet, a thermostat mounted on said holder out to one side from said valve and its rising heat currents; a throttling valve stem from said bonnet in connection with said thermostat by non-heat-transferring means; and a suitable, efficient radiant-heat-shielding means interposed between said thermostat and the adjacent heat-radiating surfaces.

[Claims 6 to 17 not printed in the Gazette.]

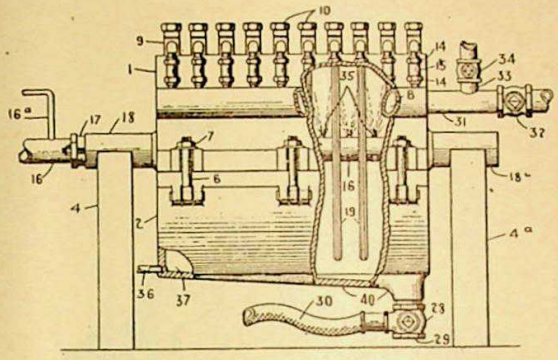
REISSUES.

14,212. COMBINED INCUBATOR AND BROODER. ALBA A. SKINNER, deceased, and FRED B. SKINNER, Greene, N. Y., assignors, by mesne assignments, to Willis A. Schleit, Syracuse, N. Y. Filed July 6, 1915. Serial No. 39,272. Original No. 944,383, dated Dec. 28, 1909, Serial No. 474,366, filed Jan. 27, 1909. Division B. (Cl. 119—30.)



The combination of a brooder provided with a vertically adjustable platform, a hover above it, hot water circulating pipes for heating the hover, a removable cover above one end of the platform, an incubator above the brooder having a hinged floor whereby the young fowls may readily descend from the incubator to the brooder, hot water circulating pipes in the incubator which are supplied from the hot water circulating pipes in the brooder, valve mechanism controlling the passage of hot water from the pipes in the brooder to those in the incubator, thermostatic devices for regulating the temperature of the hot water circulating in the pipes of the brooder, and thermostatic devices in the incubator for operating the valve mechanism to control the passage of hot water from the pipes of the brooder to the pipes of the incubator, and to thus regulate the temperature in the incubator without affecting the temperature in the brooder.

14,213. PRESSURE-FILTER. ERNEST J. SWEETLAND, Montclair, N. J. Filed Jan. 28, 1914. Serial No. 815,087. Original No. 1,032,091, dated July 9, 1912, Serial No. 684,873, filed Mar. 19, 1912. (Cl. 210—13.)



1. In a filter device comprising a peripheral frame with an outlet passage, filter cloth surrounding the frame and secured at the edges, a separator within the frame covered by the cloth, said filter device provided with a central aperture forming an open passageway therethrough, and the cloth secured together around the aperture, radial rows of stitching uniting the filter cloth at intervals.

2. A filter comprising a cylindrical filter casing with a plurality of filter plates detachably secured within the casing, each plate having a delivery tube extending through the casing and secured thereto by means of a device on the outside of the casing, a conduit on the outside of the casing for the drainage of filtered liquid, a tube leading from each filter plate to the conduit, a valve on each of said tubes, a hinged door on the lower side of the casing, an auxiliary passageway through the door.

3. A filter comprising a cylindrical filter casing with a plurality of filter plates detachably secured within the casing, each plate having a delivery tube extending through the casing and secured thereto by means of a device on the outside of the casing, a conduit on the outside of the casing for the drainage of filtered liquid, a tube leading from each filter plate to the conduit, a valve on each of said tubes, a portion of each tube made of transparent material.

4. A filter comprising a cylindrical filter casing, a plurality of filter plates attached within and removable from said casing, a hinged door attached to the filter casing and extending the full length thereof, said door provided with an auxiliary aperture for the entrance or exit of liquid, the filter plates extending below the joint between the filter casing and the door, a conduit on the filter casing and a tube and valve connecting each filter plate with the conduit.

5. A filter comprising a plurality of filter bags, a supporting structure within each bag, each bag provided with an aperture, the cloth on opposite sides of each bag joined together around the aperture and joined together at the outer edges to completely inclose the supporting structure, the cloth on both sides of the bags supported at intervals to resist internal pressure, the said apertures registering to form an unobstructed passageway through the series of bags, a rotatable pipe passing through the apertures, outlets in said pipe adapted to project streams of a cleansing fluid on the surfaces of the bags.

6. A filter comprising a plurality of filter bags, a supporting structure within each bag, each bag provided with a central aperture, the cloth on the opposite sides of each bag joined together around the aperture, the outer edges of each bag sewn together to completely inclose the supporting structure within the bag, the cloth on both sides of the bag supported at intervals to resist internal pressure, an outlet pipe leading from the interior of each bag, the central apertures alining to form a continuous passageway through the series of bags, a rotatable pipe extending through said passageway, nozzles on the pipe adapted to project a cleansing fluid on the surfaces of the bags.

7. A filter comprising a plurality of flat circular filter bags, a supporting structure inclosed in each bag, each bag provided with a central aperture, the cloth on opposite sides of each bag joined together around the central aperture, peripheral stitching uniting the outer edges of each bag to completely inclose the supporting structure within the bag, means of supporting the sides of the bag to prevent bulging when subjected to internal pressure, an outlet pipe communicating with the interior of each bag, the central apertures alining to form a continuous passageway through the series of bags, a rotatable pipe extending through said passageway and adapted to project a cleansing fluid on the surfaces of the bags.

8. A filter comprising a plurality of flat circular filter bags, a supporting structure inclosed in each bag, each bag provided with a central aperture, the cloth on opposite sides of each bag joined together around the central aperture, peripheral stitching uniting the outer edges of each bag to completely inclose the supporting structure within the bag, means of supporting the sides of the bag to prevent bulging when subjected to internal pressure, an outlet pipe communicating with the interior of each bag, the central apertures alining to form a continuous passageway through the series of bags, a rotatable pipe extending through said passageway and adapted to project a cleansing fluid on the surfaces of the bags, a casing surrounding the entire series of bags with the outlet pipes passing through said casing.

9. A filter comprising a plurality of flat circular filter bags, a supporting structure inclosed in each bag, each bag provided with a central aperture, the cloth on opposite sides of each bag joined together around the central aperture, peripheral stitching uniting the outer edges of each bag to completely inclose the supporting structure within the bag, means of supporting the sides of the bag to prevent bulging when subjected to internal pressure, an outlet pipe communicating with the interior of each bag, the central apertures alining to form a continuous passageway through the series of bags, a rotatable pipe extending through said passageway and adapted to project a cleansing fluid on the surfaces of the bags, a casing surrounding the entire series of bags with the outlet pipes passing through said casing, a drainage channel in the bottom of the casing for drainage of material washed from the bags.

10. In a pressure filter, a filter element and a two-part casing therefor divided longitudinally substantially at its middle along a horizontal plane, hinge connection between said sections, the axis of said hinge being situated to one side of the casing to permit one section to swing about the hinge from under the entire width of the other section, and bolts disposed at each side of said casing adapted to span the line of division and to clamp the sections together independently of said hinge.

11. A filter comprising a filter casing with a plurality of filter plates detachably secured within the casing, each plate having a delivery tube extending through the casing and secured thereto by means of a device on the outside of the casing, a conduit on the outside of the casing for the drainage of filtered liquid and a tube leading from each delivery tube to the conduit.

12. A filter comprising a filter casing with a plurality of filter plates detachably secured within the casing, each plate having a delivery tube extending through the casing and secured thereto by means of a device on the outside of the casing, a conduit on the outside of the casing for the drainage of filtered liquid, a tube leading from each delivery tube to the conduit, a valve on each of said second named tubes, a portion of each of said second-named tubes being made of transparent material.

13. In a filter device comprising a peripheral frame with an outlet passage, filter cloth surrounding the frame, a separator within the frame covered by the cloth, and radial rows of stitching uniting the filter cloth at intervals.

14. A filter comprising a horizontally-disposed cylindrical filter casing divided along a substantially horizontal plane and a plurality of detachable filter plates within the casing, each plate having a delivery tube extending vertically from substantially its uppermost portion and mounted in the top of the upper section of the filter casing.

15. A filter comprising a filter casing and a plurality of filter plates detachably mounted therein, each plate having

a delivery tube secured thereto and received within a portion of the casing, and means for clamping it to said casing.

16. A filter comprising a filter casing and a plurality of filter plates detachably mounted therein, each plate having a delivery tube secured thereto and received within a portion of the casing, and means for clamping it to said casing, said leaf being otherwise disconnected from the casing.

17. A filter comprising a filter casing and a plurality of filter plates detachably mounted therein, each of said plates having a delivery tube fixed with reference to said plate and received within a recess in the casing and means engaging said tube for securing the tube and the leaf supported by it to the casing.

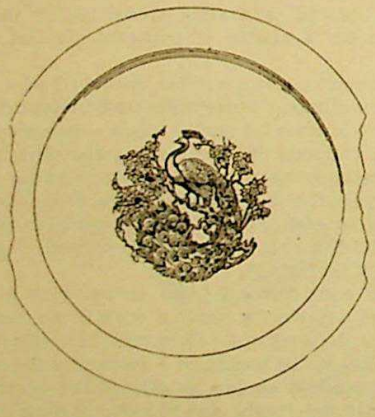
18. A filter comprising a filter casing and a plurality of filter plates detachably secured in said casing, each plate having a delivery tube extending through said casing and secured thereto by means of a device on the outside of the casing.

19. A filter comprising a filter casing and a plurality of filter plates detachably secured in said casing, each plate having a delivery tube extending through the casing and secured thereto by means of a device on the outside of the casing, said leaf being otherwise spaced from the casing.

20. A filter comprising a filter casing and a plurality of filter plates detachably secured in said casing, each plate having a delivery tube extending through the casing and secured thereto by means of a device on the outside of the casing, said leaf being otherwise unsupported in said casing.

DESIGNS.

49,841. PLATE OR SIMILAR ARTICLE. WILLIAM ABRAMS, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed Sept. 7, 1916. Serial No. 118,941. Term of patent 3½ years.

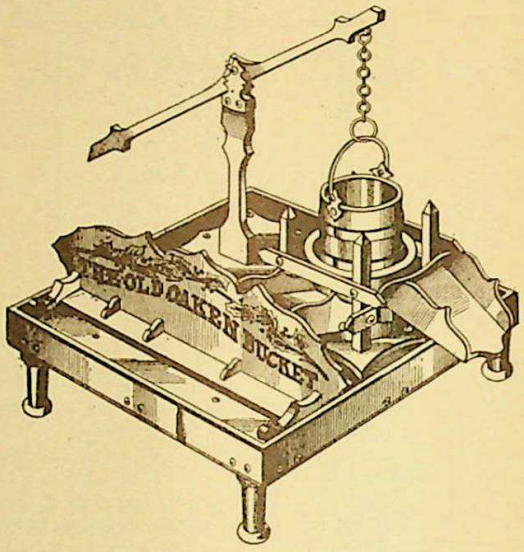


The ornamental design for a plate or similar article.

49,842. NETTED FABRIC. WILLIAM WALL CHACE, New York, N. Y. Filed May 25, 1916. Serial No. 99,907. Term of patent 3½ years.

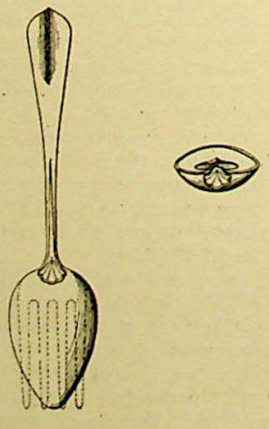
The design for netted fabric as shown.

49,843. GAME APPARATUS. AMBROSE P. CHASE, West Somerville, Mass. Filed Aug. 9, 1916. Serial No. 114,059. Term of patent 7 years.



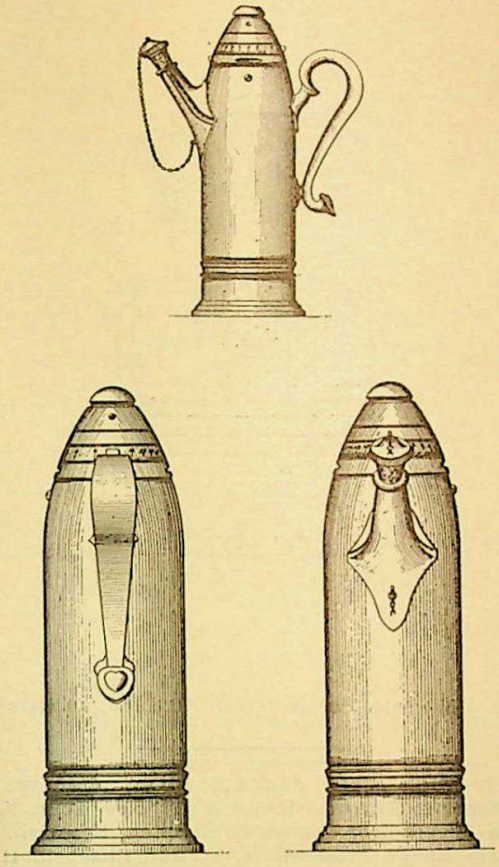
The ornamental design for a game apparatus, as shown.

49,844. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. BARTON P. JENKS, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Aug. 2, 1916. Serial No. 112,862. Term of patent 14 years.



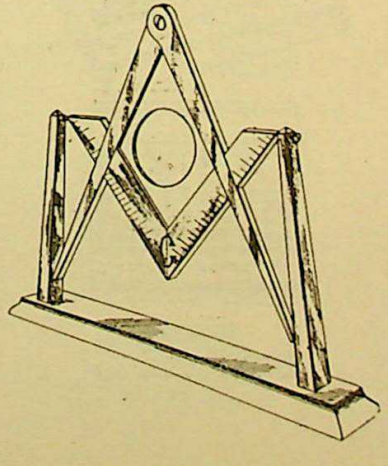
The ornamental design for a handle for spoons, forks, or similar articles, as shown.

49,845. LIQUID-SERVER OR SIMILAR ARTICLE. BARTON P. JENKS, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Aug. 2, 1916. Serial No. 112,863. Term of patent 14 years.



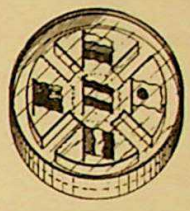
The ornamental design for a liquid server or similar article, as shown.

49,846. PICTURE-FRAME. LOUIS KLEIN, Des Moines, Iowa. Filed Mar. 13, 1916. Serial No. 83,979. Term of patent 3½ years.



The ornamental design for a picture frame, as shown.

49,847. PUZZLE-BOX. WILLIAM J. MCKOY, San Antonio, Tex. Filed Sept. 2, 1915. Serial No. 48,723. Term of patent 3½ years.



The ornamental design of a puzzle box as shown.

49,848. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,809. Term of patent 3½ years.

The ornamental design for a button substantially as shown and described.

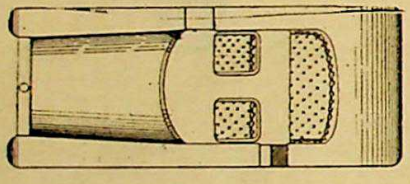
49,849. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,810. Term of patent 3½ years.

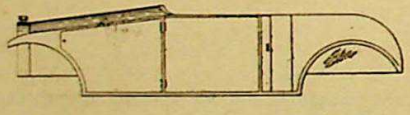
The ornamental design for a button substantially as shown and described.

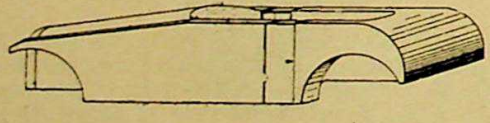
49,850. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,811. Term of patent 3½ years.

The ornamental design for a button substantially as shown and described.

49,851. AUTOMOBILE-BODY. CURT B. MUELLER, Lakewood, Ohio. Filed July 26, 1915. Serial No. 42,095. Term of patent 7 years.

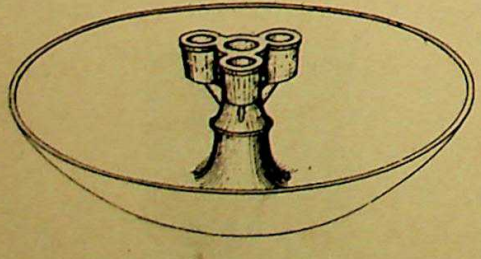






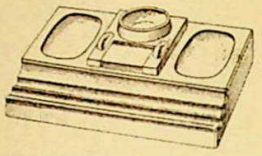
The ornamental design for an automobile body as shown.

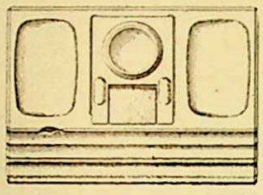
49,852. TUBE-RECEIVING PEDESTAL FOR FLOWER-STANDS. HARRY NORTHWOOD, Wheeling, W. Va. Filed Mar. 17, 1916. Serial No. 84,981. Term of patent 7 years.

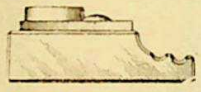


The ornamental design for a tube-receiving pedestal for flower stands, as shown.

49,853. INKSTAND. JAMES T. RILEY, Brooklyn, N. Y., assignor to Kimpton, Haupt & Co., New York, N. Y., a firm composed of Charles E. Kimpton, Brooklyn, N. Y., Harry Haupt, Elmsford, N. Y., and Elizabeth H. Harbottle, Garden City, N. Y. Filed Aug. 12, 1916. Serial No. 114,653. Term of patent 14 years.

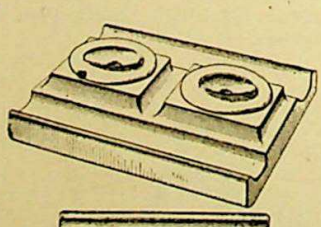


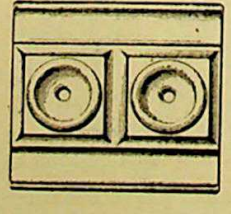




The ornamental design for an inkstand, as shown.

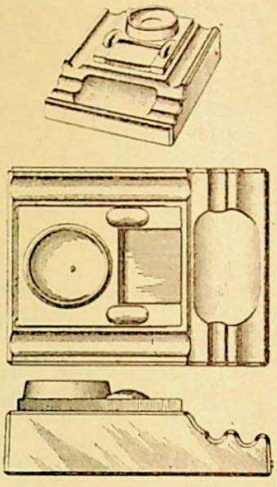
49,854. INKSTAND. JAMES T. RILEY, Brooklyn, N. Y., assignor to Kimpton, Haupt & Co., New York, N. Y., a firm composed of Charles E. Kimpton, Brooklyn, N. Y., Harry Haupt, Elmsford, N. Y., and Elizabeth H. Harbottle, Garden City, N. Y. Filed Aug. 12, 1916. Serial No. 114,654. Ter mof patent 14 years.





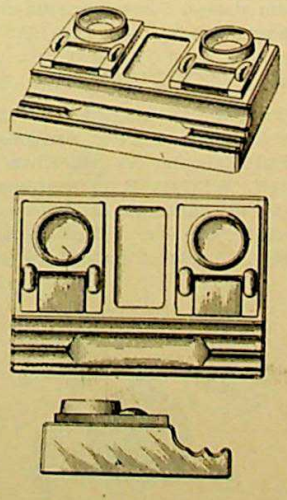
The ornamental design for an inkstand, as shown.

49,855. INKSTAND. JAMES T. RILEY, Brooklyn, N. Y., assignor to Kimpton, Haupt & Co., New York, N. Y., a firm composed of Charles E. Kimpton, Brooklyn, N. Y., Harry Haupt, Elmsford, N. Y., and Elizabeth H. Harbottle, Garden City, N. Y. Filed Aug. 12, 1916. Serial No. 114,655. Term of patent 14 years.



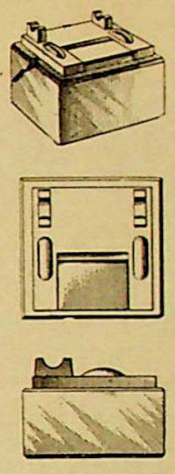
The ornamental design for an inkstand, as shown.

49,856. INKSTAND. JAMES T. RILEY, Brooklyn, N. Y., assignor to Kimpton, Haupt & Co., New York, N. Y., a firm composed of Charles E. Kimpton, Brooklyn, N. Y., Harry Haupt, Elmsford, N. Y., and Elizabeth H. Harbottle, Garden City, N. Y. Filed Aug. 12, 1916. Serial No. 114,656. Term of patent 14 years.



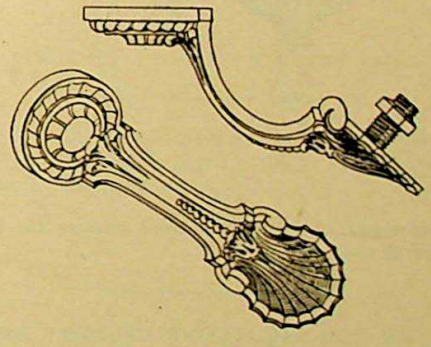
The ornamental design for an inkstand, as shown.

49,857. INKSTAND. JAMES T. RILEY, Brooklyn, N. Y., assignor to Kimpton, Haupt & Co., of New York, N. Y., a firm composed of Charles E. Kimpton, Brooklyn, N. Y., Harry Haupt, Elmsford, N. Y., and Elizabeth H. Harbottle, Garden City, N. Y. Filed Aug. 12, 1916. Serial No. 114,657. Term of patent 14 years.



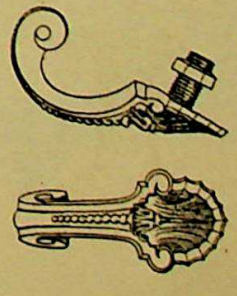
The ornamental deisgn for an inkstand, as shown.

49,858. ARM FOR LIGHTING-FIXTURES. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to New York Gas & Electric Appliance Company, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,268. Term of patent 3½ years.



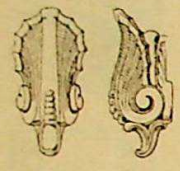
The ornamental design for an arm for lighting fixtures as shown.

49,859. BOWL-HANGER AND OUTSIDE-LIGHT SUPPORT. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to New York Gas & Electric Appliance Company, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,269. Term of patent 3½ years.



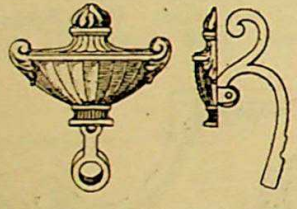
The ornamental design for a bowl hanger and outside light support as shown.

49,860. ORNAMENT FOR LIGHTING-FIXTURES. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to New York Gas & Electric Appliance Company, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,270. Term of patent 3½ years.



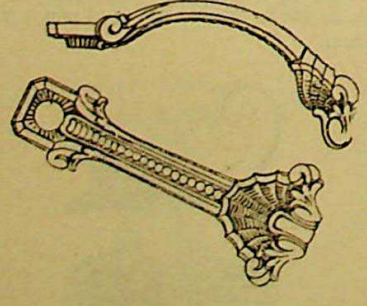
The ornamental design for an ornament for lighting fixtures as shown.

49,861. BOWL-HANGER FOR LIGHTING-FIXTURES. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to New York Gas & Electric Appliance Company, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,271. Term of patent 3½ years.



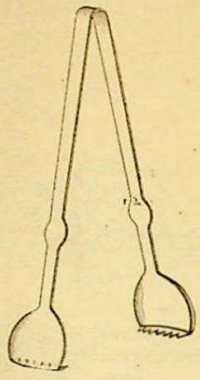
The ornamental design for a bowl hanger for lighting fixtures as shown.

49,862. ARM FOR LIGHTING-FIXTURES. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to New York Gas & Electric Appliance Company, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,272. Term of patent 3½ years.



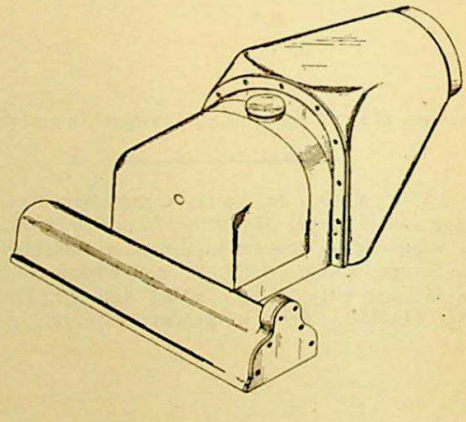
The ornamental design for an arm for lighting fixtures as shown.

49,863. TONGS. CHARLES W. SEAMAN, Newburgh, N. Y. Filed Sept. 3, 1915. Serial No. 48,884. Term of patent 3½ years.



The ornamental design for tongs, as shown.

49,864. VACUUM-CLEANER CASE. IRA L. SHEFFLER, Detroit, Mich. Filed July 17, 1916. Serial No. 109,837. Term of patent 14 years.

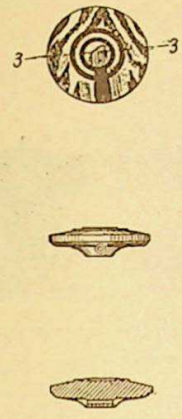


The ornamental design for a vacuum-cleaner case, substantially as shown.

49,865. BADGE OR INSIGNIA. WILLIAM HERBERT SICKELS, Newtown Square, Pa., assignor to J. E. Caldwell & Co., Philadelphia, Pa., a Firm composed of J. Ernott Caldwell, William R. Eisenhower, and Edward T. Chase, general partners, and estate of J. Albert Caldwell, special partners. Filed Sept. 22, 1916. Serial No. 121,684. Term of patent 14 years.

The ornamental design for a badge or insignia, as shown.

49,866. BUTTON. RUDOLPH SIEBERT, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,812. Term of patent 3½ years.

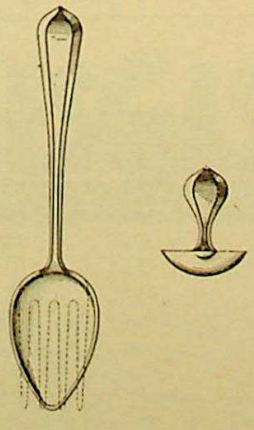


The ornamental design for a button substantially as shown and described.

49,867. BUTTON. RUDOLPH SIEBERT, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 30, 1916. Serial No. 117,814. Term of patent 3½ years.

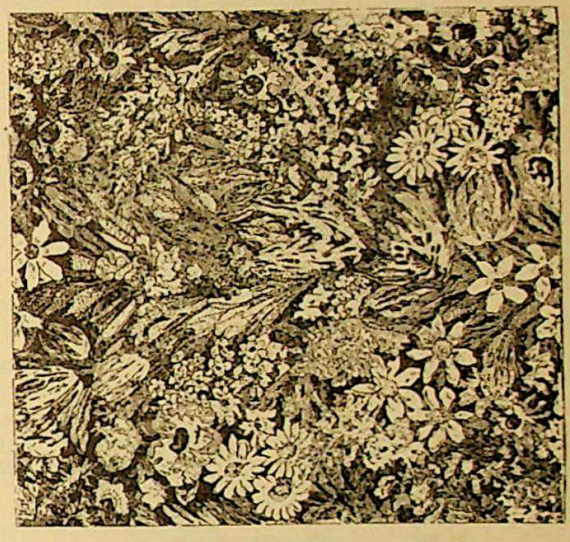
The ornamental design for a button substantially as shown and described.

49,868. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. AXEL HERMAN STAF, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Aug. 2, 1916. Serial No. 112,859. Term of patent 14 years.



The ornamental design for a handle for spoons, forks, or similar articles, as shown.

49,869. PRINTED FABRIC. HARRY WEARNE, New York, N. Y. Filed Sept. 7, 1916. Serial No. 118,929. Term of patent 7 years.



The ornamental design for a printed fabric, as shown.

49,870. PRINTED FABRIC. HARRY WEARNE, New York, N. Y. Filed Sept. 7, 1916. Serial No. 118,930. Term of patent 7 years.

The ornamental design for a printed fabric, as shown.

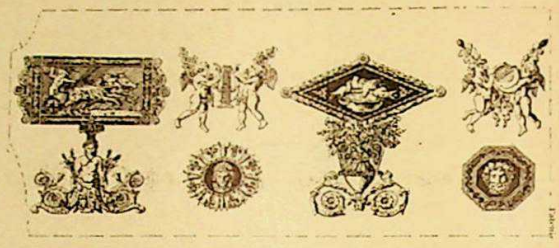
49,871. PRINTED FABRIC. HARRY WEARNE, New York, N. Y. Filed Sept. 7, 1916. Serial No. 118,932. Term of patent 7 years.

The ornamental design for a printed fabric, as shown.

49,872. PRINTED FABRIC. HARRY WEARNE, New York, N. Y. Filed Sept. 7, 1916. Serial No. 118,933. Term of patent 7 years.

The ornamental design for a printed fabric, as shown.

49,873. PRINTED FABRIC. HARRY WEARNE, New York, N. Y. Filed Sept. 7, 1916. Serial No. 118,934. Term of patent 7 years.



The ornamental design for a printed fabric, as shown.

49,874. [WITHDRAWN.]

TRADE-MARKS

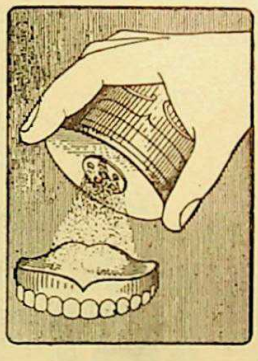
PUBLISHED NOVEMBER 7, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 80,781. (CLASS 5. ADHESIVES.) COREGA CHEMICAL COMPANY, Augusta, Me., and Cleveland, Ohio. Filed Aug. 25, 1914.



Particular description of goods.—A Dental Powder for Assisting in Holding Dental Plates in the Mouth.
Claims use since June 15, 1914.

Ser. No. 86,087. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEROME R. LANDAUER, Chicago, Ill. Filed Apr. 21, 1915.

LESGAS
SAVES GASOLINE

It being understood that the words "Saves Gasoline" shown in the drawing form no part in this trade-mark and is not claimed by me as such.
Particular description of goods.—Gasolene-Improvers or Preparations for Augmenting the Energy of Motor-Fuels.
Claims use since Sept. 1, 1914.

Ser. No. 88,742. (CLASS 39. CLOTHING.) GEO. E. KEITH COMPANY, Brockton, Mass. Filed Aug. 21, 1915.

Walk-Over

The picture of a man being fanciful and no claim being made to the representation of the shoe apart from the mark shown in the drawing.
Particular description of goods.—Boots and Shoes of Leather, Rubber, Felt, or other Fabric Construction.
Claims use since on or about Nov. 1, 1907.

Ser. No. 88,797. (CLASS 2. RECEPTACLES.) AMERICAN CAN CO., New York, N. Y. Filed Aug. 25, 1915.

ARCTIC

Particular description of goods.—Oyster-Display Cases.
Claims use since the fall of 1911.

Ser. No. 89,461. (CLASS 39. CLOTHING.) HESS BROTHERS, Allentown, Pa. Filed Sept. 25, 1915.

HESBRO

Particular description of goods.—Leather Shoes, Canvas Shoes, Rubber Shoes, Hosiery, Knitted and Woven Underwear, Aprons, Bath-Robes, Blouses, Caps, Chemises, Cloaks, Coats, Corsets, Corset-Covers, Dresses, Gloves, Mittens, Jumpers, Kimonos, Mufflers, Negligée Shirts, Nightgowns, Outer Skirts, Outer Suits, Pajamas, Pantaloons, Petticoats, Shirt-Waists, Overalls, Slippers, Suits, Sweaters, Undershirts, Underskirts, Undersuits, Underwaists, Vests, Waistcoats.
Claims use since about Sept. 1, 1915.

Ser. No. 89,497. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE TRAVELER REMEDY CO., Hot Springs, Ark. Filed Sept. 27, 1915.

LITTLE ARKANSAS TRAVELERS

Particular description of goods.—Liver-Tonic.
Claims use since Mar. 12, 1914.

Ser. No. 89,548. (CLASS 32. FURNITURE AND UPHOLSTERY.) MORRIS LIPPS, New York, N. Y. Filed Sept. 30, 1915.

LIPSPRING

Particular description of goods.—Beds, Mattresses, Bed-Springs.
Claims use since about Oct. 15, 1914.

Ser. No. 90,514. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) BENJAMIN F. KLEIN, Cleveland, Ohio. Filed Nov. 8, 1915.

KAYLINE

Particular description of goods.—Gas and Combination Lighting-Fixtures and Parts for Such Lighting-Fixtures.
Claims use since Oct. 25, 1915.

Ser. No. 91,081. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILLIAM E. PRATT, Chicago, Ill. Filed Dec. 1, 1915.

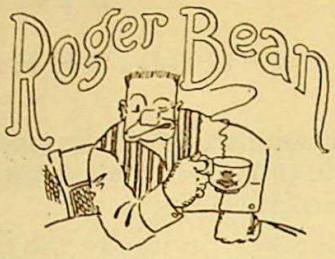
MAJOR

Particular description of goods.—Hog-Rings and Pig-Rings.
Claims use since about the year 1880.

Ser. No. 91,285. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHEPARD C. BASS, Fort Myers, Fla. Filed Dec. 8, 1915.

No claim being made to the exclusive use of the word "Brand" except in association with the mark as shown.
Particular description of goods.—Citrus Fruits.
Claims use since Oct. 1, 1912.

Ser. No. 91,333. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHNULL & CO., Indianapolis, Ind. Filed Dec. 8, 1915.



So far as this registration is concerned we disclaim the name "Roger Bean" except in connection with the other feature of the trade-mark; but we do not disclaim the name of "Roger Bean" as against persons, firms, and corporations who may use the name by way of unfair competition against us.
Particular description of goods.—Coffee.
Claims use since Sept. 15, 1915.

Ser. No. 91,402. (CLASS 39. CLOTHING.) RICE-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed Dec. 11, 1915.

Liberty Bell

Particular description of goods.—Hosiery.
Claims use since Nov. 1, 1915.

Ser. No. 92,431. (CLASS 39. CLOTHING.) BERNSTEIN, BAUM, CRAVIS & COMPANY, Philadelphia, Pa. Filed Jan. 27, 1916.

"J. J. Models"

No claim is made to the word "Models" apart from the mark shown in the drawing.
Particular description of goods.—Ladies' Skirts, Ladies' Suits, Ladies' Coats.
Claims use since on or about the 15th day of September, 1915.

Ser. No. 92,465. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DARLING & COMPANY, Chicago, Ill. Filed Jan. 28, 1916.

"Meatein."

MEATEIN

Particular description of goods.—Foods—Namely, Prepared Stock and Poultry Foods.

Claims use since July 15, 1915.

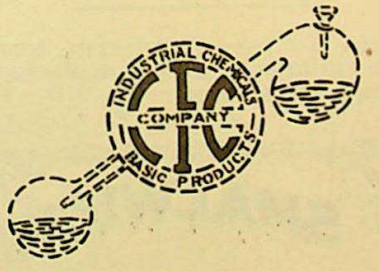
Ser. No. 92,798. (CLASS 37. PAPER AND STATIONERY.) GEO. BORGFELDT & CO., New York, N. Y. Filed Feb. 12, 1916.

MERITAS

Particular description of goods.—Pencil-Sharpeners of the Knife or Rotary-Cutter Types; Writing-Paper and Envelops, Drawing-Paper, Fancy Wrapping and Tissue Papers, Hand-Blotters and Blotting-Paper, Writing-Pads, Drawing Pads and Tablets, Paper-Cutters, Paper-Weights, Ink-Wells, Ink-Erasers, Lead and Crayon Pencils, and Penholders.

Claims use since Jan. 15, 1916.

Ser. No. 92,975. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES F. GLEDHILL, New York, N. Y. Filed Feb. 19, 1916.



No claim being made for the words "Industrial Chemicals Company Basic Products" apart from the mark shown in the drawing.

Particular description of goods.—Chemicals and Pigments for General Use—Namely, Fused Resinate Lead, Fused Resinate Zinc, Fused Resinate Cobalt, Fused Resinate Copper, Fused Resinate Alumina, Fused Resinate Calcium, Fused Resinate Chromium, Fused Resinate Magnesium, Fused Resinate Manganese, Fused Resinate Manganese and Lead, Linoleate Lead, Linoleate Cobalt, Linoleate Copper, Linoleate Manganese, Linoleate Manganese and Lead, Pale Ester Gum, Special Ester Gum, Extra-Pale Ester Gum, Prepared Wood Oil, Red Oxid Iron, Colors, Precipitated Resinate Lead, Precipitated Resinate Zinc, Precipitated Resinate Cobalt, Precipitated Resinate Copper, Precipitated Resinate Manganese, Borate Lead, Chlorid Cobalt, Borate Manganese, Chlorid Manganese, Acetate Cobalt, Nitrate Cobalt, Carbonate Cobalt, Sulfate Manganese, Resoleate Lead and Manganese, Tungate or Lignoleate Lead, Tungate or Lignoleate Cobalt, Tungate or Lignoleate Manganese, Zinc Oxid, Degras.

Claims use since Dec. 1, 1915.

Ser. No. 93,290. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AIR UTILITIES COMPANY, INC., New York, N. Y. Filed Mar. 4, 1916.

DF

Particular description of goods.—Food Products—Namely, Vegetables, Fruits, Malts, Spices, Coffees, Teas, Cocoas, Chocolates, Cassava, Copra, Sugar-Beets.

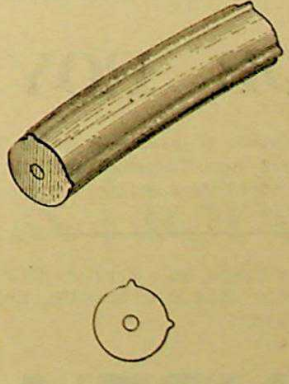
Claims use since May 25, 1913.

Ser. No. 93,469. (CLASS 15. OILS AND GREASES.) PETROLEUM PRODUCTS CO. OF CALIFORNIA, San Francisco, Cal. Filed Mar. 11, 1916.

Particular description of goods.—Gasolene, Benzin, Naphtha-Kerosene, Motor-Spirit, Fuel-Oils, and Lubricating Oils and Greases.

Claims use since Feb. 10, 1916.

Ser. No. 93,733. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ATLANTIC INSULATED WIRE & CABLE COMPANY, Jersey City, N. J., and Stamford, Conn. Filed Mar. 21, 1916.

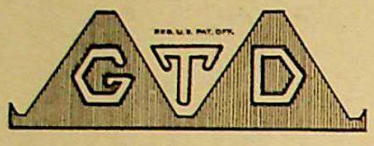


Consisting of two longitudinal ridges substantially ninety degrees apart molded in or upon the insulation, (no claim being made to the representation of the wire.)

Particular description of goods.—Insulated Wire.

Claims use since February, 1916.

Ser. No. 93,792. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) GREENFIELD TAP AND DIE CORPORATION, Greenfield, Mass. Filed Mar. 23, 1916.



The words "Reg. U. S. Pat. Off." apart from the mark shown in the drawing being hereby disclaimed.

Particular description of goods.—Gages and Micrometers.

Claims use since Oct. 1, 1915.

Ser. No. 93,801. (CLASS 39. CLOTHING.) PHILIP A. LUCKETT, Salisbury, Md. Filed Mar. 23, 1916.

PAL

Particular description of goods.—Union Suits, Undershirts, Drawers, and Pajamas Made of Textile Material.

Claims use since January, 1913.

Ser. No. 94,270. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH C. ALLEN, Plainfield, N. J. Filed Apr. 10, 1916.

ROYAL

Comprising the word "Royal."

Particular description of goods.—Toilet Preparations—viz., Toilet Creams—viz., Cold-Creams, Peroxid Cream, and Dental Creams; Toilet Powders—viz., Talcum Powders, Borated Talcum Powders, Face-Powders, Rice Powders, Tooth-Powders, and Dental Powders.

Claims use since about May, 1891.

Ser. No. 94,504. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES S. MCCLANAHAN, Justin, Tex. Filed Apr. 18, 1916.

ROB ROY

Particular description of goods.—A Salve for External Treatment of Catarrh, Sore Throat, Tonsillitis, and Croup.

Claims use since about the month of January, 1902.

Ser. No. 94,581. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE POMPEIAN CO., Baltimore, Md. Filed Apr. 20, 1916.

POMPEIAN

Particular description of goods.—Macaroni, Cheese, and Olive-Oil Emulsion.

Claims use since the 29th day of March, 1916.

Ser. No. 94,582. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE POMPEIAN CO., Baltimore, Md. Filed Apr. 20, 1916.

POMPEIAN

Particular description of goods.—Olive-Oil Emulsion.

Claims use since the 29th day of March, 1916.

Ser. No. 94,706. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLARISSA J. HALLER, New York, N. Y. Filed Apr. 25, 1916.

PHOSOLITE

Particular description of goods.—A Preparation or Dressing for the Human Hair.

Claims use since October, 1905.

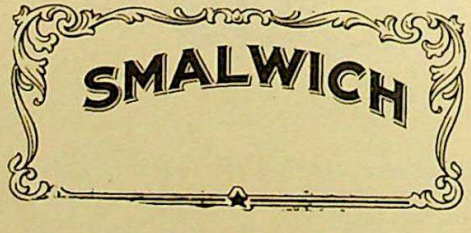
Ser. No. 94,741. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GENERAL TIRE AND RUBBER COMPANY, Akron, Ohio. Filed Apr. 27, 1916.

GENERAL

Particular description of goods.—Rubber Tires or Tire-Casings of Rubber with Suitable Strengthening Material and Inner Tubes for Pneumatic Tires.

Claims use since February, 1916.

Ser. No. 95,180. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MEYER SMOLOWITZ, New York, N. Y. Filed May 16, 1916.



Particular description of goods.—Laces and Cotton Goods in the Piece.

Claims use since Apr. 5, 1916.

Ser. No. 95,426. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed May 25, 1916.

GLYCEROSAL

Particular description of goods.—A Medicinal Chemical for the Treatment of Rheumatism.

Claims use since on or about May 1, 1916.

Ser. No. 95,548. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) F. A. HARDY & COMPANY, Chicago, Ill. Filed May 31, 1916.

HARCO

Particular description of goods.—Eyeglasses, Lenses for Optical and Scientific Uses, Goggles, Eye-Protectors, Optometers, Reading-Glasses, Trial-Frames, and Ophthalmoscopes.

Claims use since May 20, 1916.

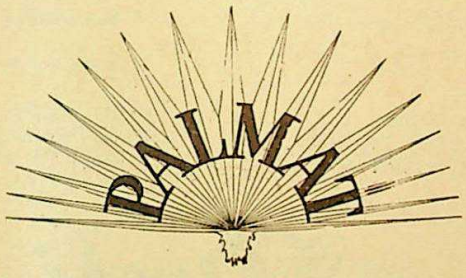
Ser. No. 95,683. (CLASS 7. CORDAGE.) PALMETTO PRODUCTS COMPANY, INC., New York, N. Y. Filed June 7, 1916.

PALMAT

Particular description of goods.—Twines and Ropes Made from Shredded Fibers of Palmetto or Palm Leaves.

Claims use since Nov. 1, 1915.

Ser. No. 95,684. (CLASS 7. CORDAGE.) PALMETTO PRODUCTS COMPANY, INC., New York, N. Y. Filed June 7, 1916.



Particular description of goods.—Twines and Ropes Made from Shredded Palmetto or Palm Leaves.

Claims use since Nov. 1, 1915.

Ser. No. 95,743. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOHN P. BARRON, Butte, Mont. Filed June 9, 1916.

The word "Cream" being hereby disclaimed. I do hereby disclaim the right to the use of said word and name upon the designs heretofore submitted to and filed with you and make no claim to the designation of "Barron" apart from the mark shown in the drawings as constituting any part of the proposed trade-mark, leaving the same merely with the representation of a bear immediately upon and forming part of the trade-mark word "Pian-Auto."

Particular description of goods.—A Furniture, Piano, and Automobile Polish and Varnish Renewer.

Claims use since Apr. 10, 1916.

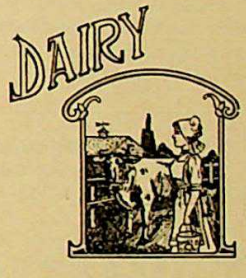
Ser. No. 95,840. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) AMERICAN MANUFACTURING COMPANY, Boston, Mass., and New York, N. Y. Filed June 13, 1916.

CLIPPER

Particular description of goods.—Oakum for Packing and Calking.

Claims use since Mar. 28, 1916.

Ser. No. 95,964. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOLEY BROS. & QUINLAN, INCORPORATED, St. Paul, Minn. Filed June 19, 1916.



Particular description of goods.—Coffee.

Claims use since on or about Sept. 15, 1914.

Ser. No. 95,979. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ORVILLE L. PRATHER, Claremore, Okla. Filed June 19, 1916.

TRADE MARK
La Floral

No claim being made for the term "Trade Mark" apart from the mark shown in the drawing.

Particular description of goods.—Hair-Tonic, Shampoo Preparations, Cold-Cream, Liquid Face-Powder, and Lip-Rouge.

Claims use since the 20th day of May, 1916.

Ser. No. 96,416. (CLASS 12. CONSTRUCTION MATERIALS.) SHRAUGER & JOHNSON, Atlantic, Iowa. Filed July 7, 1916.

CHIEF

Particular description of goods.—Metal Cupolas, Metal Ventilators, Metal Outside Grain-Elevator Doors, Metal Ridge-Roll, Sheet-Metal Building-Corners, Metal Window Frames and Sashes, Sheet-Metal Battens for Board Roofs or Walls, Vertically-Sliding-Barn-Door Hoists, Metal Silo-Roofs, Metal Silo-Ladders, Metal Silo-Chutes, Metal Roof-Window Frames and Sashes.
Claims use since June 15, 1911.

Ser. No. 96,575. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WAILES DOVE BITUMASTIC LIMITED, Newcastle-upon-Tyne, England. Filed July 14, 1916.

BITUMASTIC

Particular description of goods.—Ready-Mixed and Solid-Block Paints.
Claims use since the year 1888.

Ser. No. 96,716. (CLASS 39. CLOTHING.) LAX & BURGHEIMER, IN'C., New York, N. Y. Filed July 21, 1916.

EL-BE

Particular description of goods.—Knitted Underwear in One and Two Piece Garments.
Claims use since June 17, 1916.

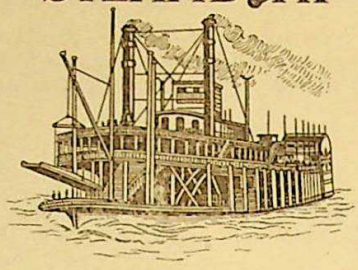
Ser. No. 96,738. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SMITH-DORSEY COMPANY, Lincoln, Nebr. Filed July 21, 1916.

Rheumatone

Particular description of goods.—A Remedy for Neuralgia and Rheumatism in All Forms.
Claims use since May 18, 1908.

Ser. No. 96,776. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE A. BURDSAL CO., Indianapolis, Ind. Filed July 24, 1916. Under ten-year proviso.

STEAMBOAT



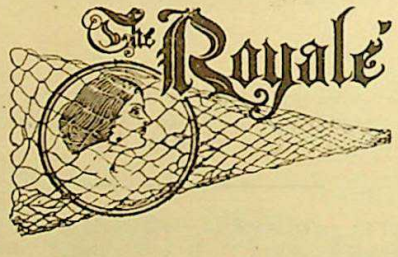
Particular description of goods.—Paste Paint, Liquid Paint, Wood-Stains, Varnishes, Enamels, Putty, Flat Finishes, Fillers, and Varnish-Stains.
Claims use since the year 1880.

Ser. No. 96,877. (CLASS 38. PRINTS AND PUBLICATIONS.) NEWSPAPER FEATURE SERVICE, INC., New York, N. Y. Filed July 26, 1916.

FULLER BULL

Particular description of goods.—A Newspaper-Section.
Claims use since July 17, 1916.

Ser. No. 96,885. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. S. BENDER CO., New York, N. Y. Filed July 27, 1916.



The representation of the female head being entirely fanciful, no claim being made to the representation of the hair-net apart from the mark as shown in the drawing.
Particular description of goods.—Hair-Nets.
Claims use since Oct. 25, 1915.

Ser. No. 96,905. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DELFO PERRUCCI, New York, N. Y. Filed July 27, 1916. Under ten-year proviso.

CHINA CALISAIA

Particular description of goods.—A Stomach-Tonic.
Claims use since about 1888.

Ser. No. 96,909. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) STONEGA COKE & COAL CO., Big Stone Gap and Wise and Lee counties, Va. Filed July 27, 1916.

RODA

Particular description of goods.—Coal and Coke.
Claims use since about 1902.

Ser. No. 96,933. (CLASS 39. CLOTHING.) OPPENHEIM, COLLINS & COMPANY, NEW YORK, New York, N. Y. Filed July 28, 1916.

Roselle

Particular description of goods.—Outer Garments—Namely, Waists; Undergarments—Namely, Shirts, Drawers, Union Suits, Combinations, Bloomers, Tights, Knickerbockers, Camisoles, Undervests, Corset-Covers, Brassières, Envelop-Chemises, Straight Chemises, and Petticoats, Made Wholly or in Part of Textile or Knitted Material or of a Combination of These Two Materials, and Hosiery.
Claims use since July 14, 1916.

Ser. No. 96,944. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMOUR AND COMPANY, Chicago, Ill. Filed July 29, 1916.

NUGGET

Particular description of goods.—Bacon and Hams.
Claims use since July 1, 1912.

Ser. No. 96,954. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LEON A. FLINKER, Detroit, Mich. Filed July 29, 1916.

PRESTO

Particular description of goods.—Razor-Strops.
Claims use since 1911.

Ser. No. 97,002. (CLASS 39. CLOTHING.) SAMUELS SHOE COMPANY, St. Louis, Mo. Filed July 31, 1916.

HUMPTY DUMPTY

Particular description of goods.—Leather Shoes.
Claims use since about Jan. 1, 1914.

Ser. No. 97,096. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN B. ROBBINS, Malden, Mass. Filed Aug. 4, 1916.

BUBBLE BALLOON CHEWING GUM

The trade-mark is printed with the background surrounding the wording in red, the words "Chewing Gum" not being a part of the trade-mark.
Particular description of goods.—Chewing-Gum.
Claims use since June 1, 1902.

Ser. No. 97,101. (CLASS 2. RECEPTACLES.) VACUUM CAN CO., Chicago, Ill. Filed Aug. 4, 1916.

AERVOID

Particular description of goods.—Food-Containers.
Claims use since Nov. 30, 1915.

Ser. No. 97,207. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CANADIAN MILL & ELEVATOR CO., El Reno, Okla. Filed Aug. 9, 1916.

LITTLE BROWN HEN

Particular description of goods.—Poultry Feed.
Claims use since November, 1914.

Ser. No. 97,218. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Aug. 9, 1916.

ZEDA

Particular description of goods.—Brooms.
Claims use since about Apr. 10, 1916.

Ser. No. 97,219. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Aug. 9, 1916.

JOLLY

Particular description of goods.—Brooms.
Claims use since about Feb. 4, 1916.

Ser. No. 97,220. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Aug. 9, 1916.

BEX

Particular description of goods.—Brooms.
Claims use since about Feb. 4, 1916.

Ser. No. 97,244. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) TATE ELECTROLYTIC WATERPROOFING COMPANY INCORPORATED, New York, N. Y. Filed Aug. 10, 1916.

TATELEC

Particular description of goods.—Waterproofed Fabric.
Claims use since the 17th day of April, 1916.

Ser. No. 97,245. (CLASS 43. THREAD AND YARN.) TATE ELECTROLYTIC WATERPROOFING COMPANY INCORPORATED, New York, N. Y. Filed Aug. 10, 1916.

TATELEC

Particular description of goods.—Waterproofed Threads and Yarns.
Claims use since the 17th day of April, 1916.

Ser. No. 97,284. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. & L. SLADE CO., Boston, Mass. Filed Aug. 11, 1916.

REVERE

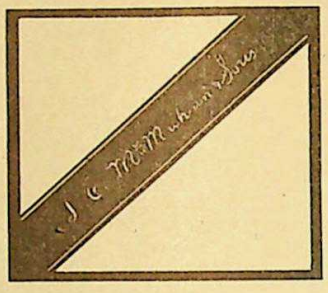
The word "Revere."
Particular description of goods.—Flavoring Extracts for Foods, and Spices.
Claims use since Jan. 1, 1914.

Ser. No. 97,302. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. B. GOFF & SONS CO., Camden, N. J. Filed Aug. 12, 1916.

HERBITOL

Particular description of goods.—A Remedy for Indigestion, Constipation, Heartburn, Coated Tongue, Loss of Appetite, Inactive Bowels, Sour Stomach, Gas-Belching, Flatulence, and Bad Taste in the Mouth.
Claims use since about June 10, 1916.

Ser. No. 97,386. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BARTLETT SPRINGS CO., San Francisco, Cal. Filed Aug. 17, 1916. Under ten-year proviso.



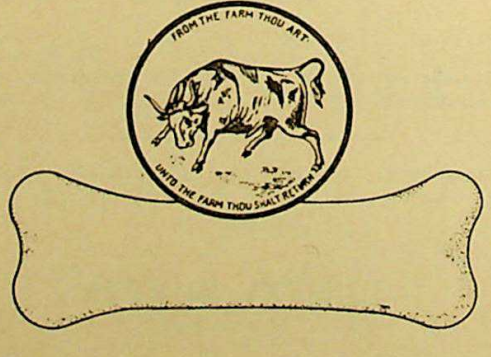
Particular description of goods.—Natural and Carbonated Mineral Water and Non-Alcoholic Carbonated Tonic Beverages to be Sold as Soft Drinks.
Claims use since the year 1888.

Ser. No. 97,407. (CLASS 39. CLOTHING.) EDSON MOORE & COMPANY, Detroit, Mich. Filed Aug. 17, 1916.

BULLGINE

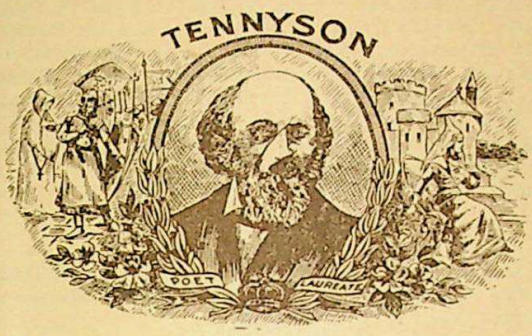
Particular description of goods.—Work-Shirts, Negligée Shirts, and Undershirts, Overalls, Jumpers, and Rompers.
Claims use since July 20, 1916.

Ser. No. 97,431. (CLASS 10. FERTILIZERS.) THE BERG COMPANY, Philadelphia, Pa. Filed Aug. 18, 1916. Under ten-year proviso.



Particular description of goods.—Fertilizers.
Claims use since 1873.

Ser. No. 97,484. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y. Filed Aug. 21, 1916.



The trade-mark consists of the word "Tennyson," a portrait of Tennyson, and the words "Poet Laureate" thereunder, the portrait being in a frame flanked on the left by a picture of some knights in battle array and a priest and on the right by a picture of a woman sitting near a castle by the sea.

Particular description of goods.—Cigars.

Claims use since prior to the year 1899.

Ser. No. 97,488. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y. Filed Aug. 21, 1916.

The trade-mark consists of the words "Tom Keene," a portrait of Thomas W. Keene in a knight's armor, and the words "Truly Yours," followed by a facsimile of Thomas W. Keene's signature.

Particular description of goods.—Cigars.

Claims use since the year 1885.

Ser. No. 97,492. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BRODSKY PALMAN GELBER CO., Chicago, Ill. Filed Aug. 21, 1916.

SINCERITY

Particular description of goods.—Canned Pineapples, Canned Peas, Canned Corn, Canned Tomatoes, Canned Pork and Beans with Tomato Sauce, Canned Spinach, Canned Prunes, Canned Pears, Canned Cherries, Canned Peaches, Canned Plums, Canned Salmon, Canned Red Kidney-Beans, Canned String-Beans, Black-Raspberry Preserves, Red-Raspberry Preserves, Strawberry Preserves, Pineapple Preserves, Plum Preserves, Peach Preserves, Blackberry Preserves, Tomato Catsup, Food-Flavoring Extracts, (Lemon and Vanilla.)

Claims use since August, 1913.

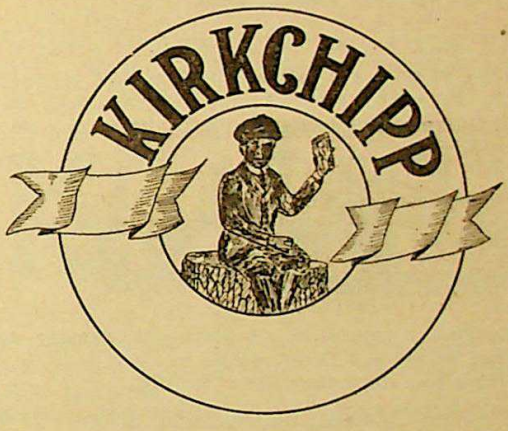
Ser. No. 97,570. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ARMAND COMPANY, Des Moines, Iowa. Filed Aug. 23, 1916.

Consisting of a blue strip showing facsimile signature "Armand" in white on each side, the color and arrangement thereof, substantially as described and shown on the accompanying drawing, being claimed as features of the mark.

Particular description of goods.—Face-Powder, Cold-Cream, Hair-Wash, Tooth-Paste, Rouge, Shampoo Preparations, Perfume.

Claims use since May 29, 1916, on face-powder; since July 27, 1916, on the other items enumerated above.

Ser. No. 97,578. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KIRKLAND DISTRIBUTING COMPANY, Columbia, S. C. Filed Aug. 23, 1916.



The portrait being that of B. B. Kirkland, Jr.

Particular description of goods.—Wheat-Flour.

Claims use since Apr. 30, 1915.

Ser. No. 97,622. (CLASS 39. CLOTHING.) ELDER MANUFACTURING COMPANY, St. Louis, Mo. Filed Aug. 25, 1916.

BLACK-JACK

Particular description of goods.—Negligée, Work, and Under Shirts.

Claims use since June 1, 1916.

Ser. No. 97,623. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. A. FINN & COMPANY, New York, N. Y. Filed Aug. 25, 1916.

Wistaria

Comprising the word "Wistaria," the lines therein merely representing shading.

Particular description of goods.—Cotton Piece Goods.

Claims use since June, 1916.

Ser. No. 97,624. (CLASS 39. CLOTHING.) FIBERITE HEEL AND LEATHER CO. INC., Whitman, Mass. Filed Aug. 25, 1916.

Fiberoke

Particular description of goods.—Composition Heels, Heel-Lifts, and Soles.
Claims use since Apr. 22, 1916.

Ser. No. 97,639. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GENERAL ALUMINUM & BRASS MANUFACTURING COMPANY, Detroit, Mich. Filed Aug. 26, 1916.

RING TRUE

Particular description of goods.—Bearings and Bushings.
Claims use since July 21, 1916.

Ser. No. 97,683. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCIS H. GLAZEBROOK, Morristown, N. J. Filed Aug. 29, 1916.

NoTox

Particular description of goods.—A Remedy for Intestinal Stasis and Constipation.
Claims use since about Aug. 1, 1916.

Ser. No. 97,733. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y. Filed Aug. 31, 1916.

MESCo

Particular description of goods.—Telegraph-Keys, Telegraph-Sounders, Electric Relays, Electric Resonators, Lightning-Arresters, Electric Cut-Outs, Electric Switches and Parts Thereof, Electric Condensers, Induction-Coils, Electric-Spark-Gap Appliances, Leyden Jars, Wireless-Telegraph Apparatus and Appliances, Tuning-Coils, Head-Receivers, Insulators, Electric Detectors, Potentiometers, Telephone Receivers and Transmitters, Electrically-Operated Bells, Buzzers, and Sounders, Telephone-Brackets, Telephones, Electric Motors and Generators, Electric Switches of All Sorts and Their Parts, Face-Plates for Electrical Devices, Push-Buttons for Electric Switches, Electric-Burglar-Alarm Attachments, Electric Annunciators, Wet and Dry Batteries and Attachments Therefor, Electric Lamp-Sockets and Search-Lights, Electric-Battery Cases, Storage Batteries, Battery Zincs and Coppers, Electric Door-Openers, Electric Conduit and Tubing and Attachments, Electric Gas-Lighting Attachments, Electric Ignition Apparatus, Including Spark-Coils and Attachments, Spark-Plugs, Electrically-Operated Signal-Horns; Electric-Lamp Receptacles, Brackets Therefor, and Attachments of All Sorts; Electric Resistances and Coils and Apparatus Embodying the Same, Including Cooking Appliances, Percolators, Stoves, Boilers, Heaters, Chafing-Dishes, Laundry-Irons, Curling-Irons, Heating-Pads, and Parts and Attachments Therefor; Electrically-Operated Fans and Motors, Electric Cut-Outs, Fuses, Rosettes, Cleats, Attachment-Plugs, Current-Taps, Electric Connectors, Wire and Cord Terminals, Electric Receptacles, Outlet-Boxes, Electric-Fire-Alarm Boxes, Battery-Connectors and Wire-Connectors, and Binding-Posts.
Claims use since November, 1905.

Ser. No. 97,778. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. M. ATKINSON, Minneapolis, Minn. Filed Sept. 5, 1916.

FREEDOM

Particular description of goods.—Wheat-Flour.
Claims use since Aug. 18, 1916.

Ser. No. 97,799. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LOS ANGELES FOUNDRY COMPANY, Los Angeles, Cal. Filed Sept. 5, 1916.

DUROLOID

Particular description of goods.—Balls for Ball and Tube Mills.
Claims use since June 20, 1916.

Ser. No. 97,831. (CLASS 39. CLOTHING.) EFFA B. AMSDEN, Minneapolis, Minn. Filed Sept. 7, 1916.

Effa Blanche

The name being shown in the handwriting of the applicant.
Particular description of goods.—Petticoats, Union Suits, Corset-Covers, Drawers, Camisoles, Nightgowns, Combination-Suits, and Negligée Garments.
Claims use since Dec. 1, 1914.

Ser. No. 97,839. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FERDINAND F. JELKE, Boston, Mass. Filed Sept. 7, 1916.

DOMESTIC

Particular description of goods.—Margarin.
Claims use since Sept. 1, 1916.

Ser. No. 97,888. (CLASS 10. FERTILIZERS.) THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, New York, N. Y. Filed Sept. 11, 1916. Under ten-year proviso.

Particular description of goods.—Fertilizers.
Claims use since Jan. 5, 1868.

Ser. No. 97,894. (CLASS 2. RECEPTACLES.) CHASE BAG CO., St. Louis, Mo. Filed Sept. 11, 1916. Under ten-year proviso.

CHASE

Particular description of goods.—Bags.
Claims use since about the year 1866.

Ser. No. 97,900. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. A. ECKHART MILLING CO., Chicago, Ill. Filed Sept. 11, 1916.

DADDY DOLLAR

Particular description of goods.—Wheat-Flour.
Claims use since 1878.

Ser. No. 97,907. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) INFANTS SPECIALTY COMPANY INC., Buffalo, N. Y. Filed Sept. 11, 1916.

The Bunny Nursing Bottle

No claim being made for the words "The" and "Nursing Bottle."
Particular description of goods.—Nursing-Bottles.
Claims use since about Aug. 18, 1916.

Ser. No. 97,924. (CLASS 37. PAPER AND STATIONERY.) NEENAH PAPER COMPANY, Neenah, Wis. Filed Sept. 11, 1916.

SYMBOL

Particular description of goods.—Bond and Ledger Paper.
Claims use since Mar. 25, 1916.

Ser. No. 97,929. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ROMANN & BUSH PIG IRON & COKE CO., St. Louis, Mo. Filed Sept. 11, 1916.

AJAX

Particular description of goods.—Coal.
Claims use since about July 1, 1910.

Ser. No. 97,953. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LLOYDS OF AMERICA, Bradley Beach, N. J. Filed Sept. 12, 1916.

KOALINE

Particular description of goods.—A Preparation to be Added or Applied to Coal to Render the Combustion of the Coal More Complete.
Claims use since the 1st day of January, 1916.

Ser. No. 97,956. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RUDOLPH MERTIN, Boston, Mass. Filed Sept. 12, 1916.

LAXATIVE

No claim being made to the word "Laxative" apart from the mark shown in the drawing.
Particular description of goods.—Laxatives.
Claims use since May 1, 1916.

Ser. No. 97,964. (CLASS 17. TOBACCO PRODUCTS.) OTTO EISENLOHR & BROS. INCORPORATED, Philadelphia, Pa. Filed Sept. 11, 1916.

Henrietta

Consisting of the word "Henrietta."
Particular description of goods.—Cigars.
Claims use since in or about the month of June, 1891.

Ser. No. 97,967. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CANDY CO., Milwaukee, Wis. Filed Sept. 13, 1916.

Milady

Particular description of goods.—Chocolates and Candy Goods of Various Kinds.
Claims use since about Oct. 15, 1907.

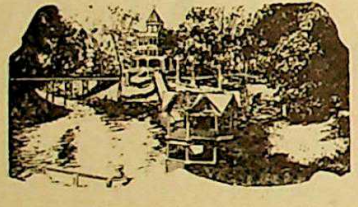
Ser. No. 97,972. (CLASS 15. OILS AND GREASES.) GALENA-SIGNAL OIL COMPANY, Franklin, Pa. Filed Sept. 13, 1916.

GALSIG

Particular description of goods.—Illuminating and Lubricating Oils and Greases.
Claims use since Feb. 9, 1916.

Ser. No. 97,975. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHNSON BROS., Greenspring, Ohio. Filed Sept. 13, 1916.

OAK RIDGE



Our trade-mark consists of a rectangular panel having thereon the representation of a spring inclosed in a small frame building and surrounded by water and foliage, a hotel being shown in the background and an inclined board walk leading from said building to the hotel, above which appear the words "Oak Ridge."
Particular description of goods.—Mineral Water.
Claims use since Jan. 1, 1903.

Ser. No. 97,978. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PENINSULAR CHEMICAL COMPANY, Detroit, Mich. Filed Sept. 13, 1916.

Penslar

Particular description of goods.—Hot-Water Bottles and Fountain-Syringes.
Claims use since Aug. 15, 1916.

Ser. No. 97,997. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SARAH LEVY, New York, N. Y. Filed Sept. 15, 1916.

YVEL

Particular description of goods.—Dandruff Remedy and Hair-Restorer.
Claims use since about Jan. 15, 1916.

Ser. No. 98,005. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STEPHEN BRITTON, New York, N. Y. Filed Sept. 15, 1916.

Sensapersa

The trade-mark consists of the word "Sensapersa" and a fez or oriental cap.
Particular description of goods.—A Medicinal Preparation Used as a Tonic and Nerve-Sedative.
Claims use since May 1, 1913.

Ser. No. 98,006. (CLASS 37. PAPER AND STATIONERY.) EATON, CRANE & PIKE COMPANY, Pittsfield, Mass. Filed Sept. 15, 1916.

Ryta-line

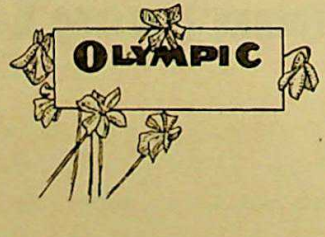
Particular description of goods.—Writing-Paper, Printing-Paper, Envelops, Tablets, Writing-Cards, and Cardboard.
Claims use since Sept. 5, 1916.

Ser. No. 98,022. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Sept. 16, 1916.

GILT EDGE

Particular description of goods.—Canned Salmon.
Claims use since 1880.

Ser. No. 98,023. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Sept. 16, 1916.



Particular description of goods.—Canned Salmon.
Claims use since 1891.

Ser. No. 98,024. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Sept. 16, 1916.

WESTCOAST

Particular description of goods.—Canned Salmon.
Claims use since 1882.

Ser. No. 98,036. (CLASS 17. TOBACCO PRODUCTS.) THE TEXAS TOBACCO CO., San Antonio, Tex. Filed Sept. 16, 1916.

OSO
NEGRO

Particular description of goods.—Smoking-Tobacco.
Claims use since about May 1, 1916.

Ser. No. 98,061. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) RENNOUS, KLEINLE & COMPANY, Baltimore, Md. Filed Sept. 18, 1916.

STRANGLEHOLD

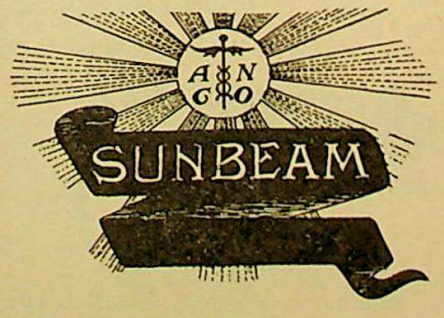
Particular description of goods.—Paint, Varnish, Whitewash, Calcimine, Plasterers', Paper-Hangers', Dusting, Sweeping, Artists', Stencil, Glue, Scrubbing, Washing, and Rubbing Brushes.
Claims use since Jan. 1, 1915.

Ser. No. 98,063. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) RENNOUS, KLEINLE & COMPANY, Baltimore, Md. Filed Sept. 18, 1916.

RED DEVIL

Particular description of goods.—Paint, Varnish, Whitewash, Calcimine, Plasterers', Paper-Hangers', Dusting, Sweeping, Artists', Stencil, Glue, Scrubbing, Washing, and Rubbing Brushes.
Claims use since Jan. 1, 1915.

Ser. No. 98,070. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) AUSTIN NICHOLS & CO., INC., Brooklyn and New York, N. Y. Filed Sept. 19, 1916.



Particular description of goods.—Grape-Juice and Apple Nectar.
Claims use on grape-juice since July 2, 1909, and on apple nectar since Dec. 1, 1915.

Ser. No. 98,099. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LOUIS ROESSEL & CO., New York, N. Y. Filed Sept. 19, 1916.

Jeanette

Particular description of goods.—Crape Silk.
Claims use since July 1, 1916.

Ser. No. 98,106. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TIOGA MILL & ELEVATOR CO., Waverly, N. Y. Filed Sept. 19, 1916.

COLONEL'S RATION

No claim being made to the exclusive use of the word "Ration" except in association with the mark shown.
Particular description of goods.—Dairy Feed.
Claims use since Jan. 1, 1916.

Ser. No. 98,110. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) BALTIMORE BARGAIN HOUSE, Baltimore, Md. Filed Sept. 20, 1916.

TALKING Syraphone MACHINE

No claim being made to the words "Talking Machine" apart from the matter shown.
Particular description of goods.—Talking-Machines.
Claims use since Aug. 19, 1916.

Ser. No. 98,116. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) R. H. MACY & CO., New York, N. Y. Filed Sept. 20, 1916.

Sheertex

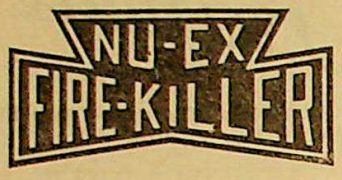
Particular description of goods.—Cotton Piece Goods, Nainsooks, and Long-Cloths.
Claims use since Aug. 15, 1916.

Ser. No. 98,129. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL & COMPANY, New York, N. Y. Filed Sept. 21, 1916.

VELFUR

Particular description of goods.—Plushes in the Piece.
Claims use since the 13th day of January, 1916.

Ser. No. 98,132. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BARGAR MFG. CO., Columbus, Ohio. Filed Sept. 21, 1916.

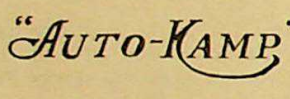


No exclusive right to the words "Fire-Killer" apart from the mark as shown is claimed.

Particular description of goods.—Chemical Fire-Extinguishers.

Claims use since Sept. 1, 1916.

Ser. No. 98,152. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) AUTO-KAMP EQUIPMENT CO., INC., Saginaw, Mich. Filed Sept. 22, 1916.



Particular description of goods.—Automobile-Trailers.

Claims use since March, 1916.

Ser. No. 98,162. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EDWIN S. EBY, Lewistown, Pa. Filed Sept. 22, 1916.

Particular description of goods.—A Non-Alcoholic Beverage to be Sold as a Soft Drink.

Claims use since November, 1915.

Ser. No. 98,166. (CLASS 39. CLOTHING.) F. M. HOYT SHOE COMPANY, Manchester, N. H. Filed Sept. 22, 1916

No claim being made to the word "Shoe" apart from the mark shown in the drawing.

Particular description of goods.—Leather Boots and Shoes.

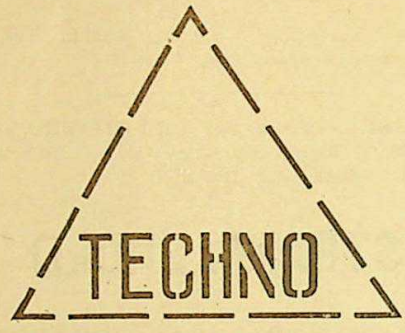
Claims use since 1903.

Ser. No. 98,199. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNITED DRUG COMPANY, Boston, Mass. Filed Sept. 23, 1916.

Particular description of goods.—Candy.

Claims use since prior to January, 1910.

Ser. No. 98,200. (CLASS 15. OILS AND GREASES.) THE AMERICAN COTTON OIL COMPANY, Guttenberg, N. J., and New York, N. Y. Filed Sept. 25, 1916.



Particular description of goods.—Cotton-Seed Oil for Screw-Cutting and All other Lubricating Purposes.

Claims use since Apr. 1, 1916.

Ser. No. 98,206. (CLASS 39. CLOTHING.) FAUNCE AND SPINNEY INC., Lynn, Mass. Filed Sept. 25, 1916.

Particular description of goods.—Women's, Misses', and Children's Boots, Shoes, and Slippers Made of Leather and Leather and Cloth.

Claims use since about May 1, 1900.

Ser. No. 98,212. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CLAUS F. P. KORSSELL, Chicago, Ill. Filed Sept. 25, 1916.

Particular description of goods.—Non-Alcoholic Beverages Put Up in Bottles, Kegs, and Barrels for Dispensing at Soda-Fountains and as Soft Drinks by Bottling Establishments.

Claims use since Mar. 1, 1914.

Ser. No. 98,241. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) FREDERICK & NELSON, Seattle, Wash. Filed Sept. 26, 1916.

GLOBE TROTTER

Particular description of goods.—Trunks.
Claims use since about Sept. 16, 1916.

Ser. No. 98,251. (CLASS 37. PAPER AND STATIONERY.) THE SAMUEL C. TATUM CO., Cincinnati, Ohio. Filed Sept. 26, 1916.

Rex

Particular description of goods.—Punching-Machines as Office Appliances for Perforating Sheets.
Claims use since May, 1915.

Ser. No. 98,271. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE QUAKER-KOLA COMPANY, Wilmington, Del., and Philadelphia, Pa. Filed Sept. 27, 1916.

QUAKOLA

No claim being made to the word "Kola" apart from the mark shown in the drawing.
Particular description of goods.—A Soft Drink.
Claims use since the 15th day of July, 1916.

Ser. No. 98,294. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) KALO-KAIN CHEMICAL CO., Detroit, Mich. Filed Sept. 28, 1916.

KALO-KAIN

Particular description of goods.—Ampuls.
Claims use since Sept. 13, 1916.

Ser. No. 98,322. (CLASS 12. CONSTRUCTION MATERIALS.) THE EUCLID STONE & BRICK CO., Cleveland, Ohio. Filed Sept. 29, 1916.

GLAS-ROX

Particular description of goods.—Enamel-Coated Natural Stone.
Claims use since the middle of September, 1916.

Ser. No. 98,387. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) LYON, CONKLIN & CO. INC., Baltimore, Md. Filed Oct. 3, 1916. Under ten-year proviso.

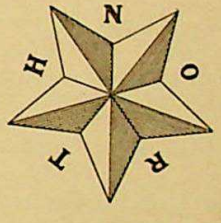
EDGAR

Particular description of goods.—Terne Plates.
Claims use since the year 1890.

Ser. No. 98,393. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL K. SALEEBY, New York, N. Y. Filed Oct. 3, 1916.

No claim being made to the words "Brooklyn, N. Y."
Particular description of goods.—A Medical and Pharmaceutical Preparation for the Curing of Corns.
Claims use since November, 1914.

Ser. No. 98,443. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NORTH STAR WOOLEN MILL CO., Minneapolis, Minn. Filed Oct. 5, 1916.



Particular description of goods.—Woven Woolen Fabrics.
Claims use since about the 1st day of January, 1870.

Ser. No. 98,503. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) STAR CORUNDUM WHEEL CO., Detroit, Mich. Filed Oct. 7, 1916.

STARALOX

Particular description of goods.—Grinding-Wheels.
Claims use since Sept. 1, 1916.

Ser. No. 98,518. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ITALIAN BED SPREAD CO., New York, N. Y. Filed Oct. 9, 1916.

Aurelia

Comprising the word "Aurelia."
Particular description of goods.—Cotton Bedspreads.
Claims use since Oct. 3, 1916.

TRADE-MARK REGISTRATIONS GRANTED

NOVEMBER 7, 1916.

113,851. BODY-BRACE. The Abformator Support Co., Inc., Watertown, N. Y.
Filed August 2, 1915. Serial No. 88,349. PUBLISHED SEPTEMBER 5, 1916.

113,852. HOMOGENEOUS WATERPROOF AND FIRE-RESISTING WOOD SUBSTITUTES MADE FROM PULP. The Agasote Millboard Co., Trenton, N. J., and New York, N. Y.
Filed June 19, 1916. Serial No. 95,775. PUBLISHED SEPTEMBER 5, 1916.

113,853. OINTMENT FOR THE RELIEF OF SKIN ERUPTIONS. Alexander Drug Co., Oklahoma, Okla.
Filed January 28, 1916. Serial No. 92,462. PUBLISHED SEPTEMBER 5, 1916.

113,854. EDIBLE CONTAINERS FOR CREAMS, ICE-CREAMS, LIQUID AND SEMILIQUID FOODS AND CONFECTIONS. American Ingenuities Corporation, Brooklyn, N. Y.
Filed May 5, 1916. Serial No. 94,912. PUBLISHED AUGUST 29, 1916.

113,855. [WITHDRAWN.]

113,856. CARBURETERS AND PARTS THEREOF FOR INTERNAL-COMBUSTION ENGINES. The Aston Motor Accessories Co. Ld., Birmingham, England.
Filed April 17, 1916. Serial No. 94,469. PUBLISHED SEPTEMBER 5, 1916.

113,857. LINIMENT. James Sidney Bishop, Glenmora, La.
Filed July 21, 1916. Serial No. 96,708. PUBLISHED SEPTEMBER 5, 1916.

113,858. TOILET POWDER. A. Bourjois & Co., Inc., New York, N. Y.
Filed September 1, 1915. Serial No. 88,943. PUBLISHED SEPTEMBER 5, 1916.

113,859. SHEET-METAL ROOFING. Braden Manufacturing Company, Terre Haute, Ind.
Filed May 22, 1916. Serial No. 95,318. PUBLISHED SEPTEMBER 5, 1916.

113,860. FACE-CREAM. Lemuel Burd, New York, N. Y.
Filed June 28, 1916. Serial No. 96,190. PUBLISHED SEPTEMBER 5, 1916.

113,861. BUTTER, CHEESE, SWEET CREAM, DRY WHOLE MILK, DRY SKIM-MILK, DRY BUTTER-MILK, AND EGGS. California Central Creameries, San Francisco, Cal.
Filed June 28, 1916. Serial No. 96,193. PUBLISHED AUGUST 29, 1916.

113,862. FANCY MATERIALS FOR HAND-EMBROIDERY WORK COMPRISING SKEINS AND BALLS OF EMBROIDERY-COTTON, COTTON EMBROIDERY-CORD, COTTON EMBROIDERY-ROPE, COTTON EMBROIDERY-FLOSS, AND EMBROIDERY-TINSEL. Campbell, Metzger & Jacobson, New York, N. Y.
Filed December 31, 1915. Serial No. 91,847. PUBLISHED MAY 23, 1916.

113,863. PORTLAND CEMENT FOR STRUCTURAL PURPOSES. Cape Girardeau Portland Cement Co., Cape Girardeau, Mo.
Filed July 3, 1916. Serial No. 96,289. PUBLISHED SEPTEMBER 5, 1916.

113,864. SYRUP FOR SODA-WATER. Celro-Kola Company, Portland, Oreg.
Filed August 7, 1916. Serial No. 97,134. PUBLISHED SEPTEMBER 5, 1916.

113,865. FURNITURE-POLISH. City Music Company, Detroit, Mich.
Filed July 12, 1916. Serial No. 96,522. PUBLISHED SEPTEMBER 5, 1916.

113,866. CATALOGUES, PRICE-LISTS, AND OTHER PUBLICATIONS. James B. Clow & Sons, Chicago, Ill.
Filed February 14, 1916. Serial No. 92,830. PUBLISHED AUGUST 29, 1916.

113,867. LEATHER BOOTS AND SHOES. The Commonwealth Shoe and Leather Company, Portland, Me., and Boston, Mass.
Filed June 30, 1916. Serial No. 96,247. PUBLISHED AUGUST 29, 1916.

113,868. MEAT, FRUIT, AND VEGETABLE SLICERS. Crystal Percolator Co. Inc., New York, N. Y.
Filed July 31, 1916. Serial No. 96,978. PUBLISHED SEPTEMBER 5, 1916.

113,869. CERTAIN NAMED CUTLERY AND TOOLS. Darwin & Milner Inc., New York, N. Y.
Filed July 6, 1916. Serial No. 96,351. PUBLISHED SEPTEMBER 5, 1916.

113,870. OARS. De Grauw, Aymar & Company, New York, N. Y.
Filed July 29, 1916. Serial No. 96,952. PUBLISHED SEPTEMBER 5, 1916.

113,871. GRAPE-FLAVORED BEVERAGES AND SYRUPS FOR MAKING THE SAME. Charles J. Donnelly, Chicago, Ill.
Filed July 27, 1916. Serial No. 96,887. PUBLISHED SEPTEMBER 5, 1916.

113,872. PHARMACEUTICAL PREPARATIONS FOR RHEUMATISM, LUMBAGO, AND SCIATICA. Fred F. Dow, Los Angeles, Cal.
Filed November 8, 1915. Serial No. 90,499. PUBLISHED SEPTEMBER 5, 1916.

113,873. MEDICINAL PREPARATION IN TABLET FORM FOR STOMACH AILMENTS. Eatonic Remedy Co., Chicago, Ill.
Filed July 20, 1916. Serial No. 96,688. PUBLISHED SEPTEMBER 5, 1916.

113,874. MEDICINAL PREPARATION IN TABLET FORM FOR STOMACH AILMENTS. Eatonic Remedy Co., Chicago, Ill.
Filed July 20, 1916. Serial No. 96,689. PUBLISHED SEPTEMBER 5, 1916.

113,875. MEDICINAL PREPARATION FOR THE RELIEF OF RHEUMATIC PAINS, HEADACHES, AND COLDS. The Edwards Laboratories Company, Cleveland, Ohio.
Filed June 8, 1916. Serial No. 95,702. PUBLISHED SEPTEMBER 5, 1916.

113,876. MEDICINE FOR STOMACH, LIVER, KIDNEYS, BOWELS, AND PURIFICATION OF THE BLOOD. E. M. Co., Cincinnati, Ohio.
Filed July 13, 1916. Serial No. 96,540. PUBLISHED SEPTEMBER 5, 1916.

113,877. MEDICINAL WATER USED WHERE ANTISEPTIC OR DISINFECTING AGENT IS REQUIRED. The Eman Manufacturing Company, Denver, Colo.
Filed July 8, 1915. Serial No. 87,825. PUBLISHED SEPTEMBER 5, 1916.

113,878. MULSIFIED AND SAPONIFIED COCOANUT-OIL. Empire Chemical Company, Dallas, Tex.
Filed June 30, 1916. Serial No. 96,248. PUBLISHED SEPTEMBER 5, 1916.

113,879. EYE LOTION OR WASH. ALBERT W. FUHRMANN, Chicago, Ill.
Filed July 31, 1916. Serial No. 96,988. PUBLISHED SEPTEMBER 5, 1916.

113,880. CHEESE. GERBER & Co., Thoune, Switzerland.
Filed November 5, 1915. Serial No. 90,434. PUBLISHED AUGUST 22, 1916.

113,881. GUM HEADINGS FOR BARRELS AND CASKS. HIMMELBERGER-HARRISON LUMBER Co., Cape Girardeau, Mo.
Filed May 26, 1916. Serial No. 95,445. PUBLISHED SEPTEMBER 5, 1916.

113,882. MEDICINE FOR TREATMENT OF THE EFFECTS OF INEBRIETY. HENRY J. GLICK, Cumberland, Md.
Filed June 22, 1916. Serial No. 96,054. PUBLISHED SEPTEMBER 5, 1916.

113,883. MEDICAL PREPARATION IN THE NATURE OF A TONIC FOR TREATING THE TOBACCO HABIT. J. H. HOLIHAN, Bismarck, N. D.
Filed July 19, 1916. Serial No. 96,668. PUBLISHED SEPTEMBER 5, 1916.

113,884. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. FERD T. HOPKINS & SON, New York, N. Y.
Filed December 11, 1915. Serial No. 91,398. PUBLISHED SEPTEMBER 5, 1916.

113,885. MEDICINAL PREPARATION, A TONIC AND BLOOD-PURIFIER. DENNIS HILLS HUNT, Johnson City, Tenn.
Filed July 27, 1916. Serial No. 96,889. PUBLISHED SEPTEMBER 5, 1916.

113,886. CERTAIN NAMED BELTING, HOSE, AND MACHINERY PACKING. IMPERIAL RUBBER Co., New York, N. Y.
Filed June 24, 1912. Serial No. 64,341. PUBLISHED SEPTEMBER 5, 1916.

113,887. PREPARATION FOR THE TREATMENT OF HOG-CHOLERA. IDA E. JOHNSON, Peru, Ind.
Filed June 26, 1916. Serial No. 96,146. PUBLISHED SEPTEMBER 5, 1916.

113,888. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. GEORGE A. KERROS, Chicago, Ill.
Filed July 7, 1916. Serial No. 96,410. PUBLISHED SEPTEMBER 5, 1916.

113,889. CERTAIN NAMED MEASURING AND SCIENTIFIC APPLIANCES. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed July 29, 1916. Serial No. 96,959. PUBLISHED SEPTEMBER 5, 1916.

113,890. STRENGTHENING APPLICATION FOR EGGS DURING INCUBATION. GEO. H. LEE COMPANY, Omaha, Nebr.
Filed July 28, 1916. Serial No. 96,926. PUBLISHED SEPTEMBER 5, 1916.

113,891. DIAPERS. LEHIGH PAPER MILLS, INC., New York, N. Y.
Filed January 11, 1916. Serial No. 92,064. PUBLISHED SEPTEMBER 5, 1916.

113,892. POWDER-PUFFS. MAURICE LEVY, New York, N. Y.
Filed July 15, 1916. Serial No. 96,589. PUBLISHED SEPTEMBER 5, 1916.

113,893. POWDER-PUFFS. MAURICE LEVY, New York, N. Y.
Filed July 15, 1916. Serial No. 96,590. PUBLISHED SEPTEMBER 5, 1916.

113,894. MASSAGE-CREAM TO SOFTEN AND WHITEN THE SKIN. MATTHEWS & LIVELY Co., Atlanta, Ga.
Filed July 21, 1916. Serial No. 96,719. PUBLISHED SEPTEMBER 5, 1916.

113,895. BROAD SILKS IN THE PIECE. JULIUS A. MIGEL, New York, N. Y.
Filed November 2, 1915. Serial No. 90,346. PUBLISHED SEPTEMBER 5, 1916.

113,896. TOY BALLOONS. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed July 20, 1916. Serial No. 96,693. PUBLISHED SEPTEMBER 5, 1916.

113,897. CERTAIN NAMED ELECTRIC ILLUMINATING APPARATUS. NATIONAL X-RAY REFLECTOR COMPANY, Chicago, Ill.
Filed June 12, 1916. Serial No. 95,826. PUBLISHED SEPTEMBER 5, 1916.

113,898. PORCELAIN REFLECTORS FOR LIGHTING-FIXTURES. NATIONAL X-RAY REFLECTOR COMPANY, Chicago, Ill.
Filed July 27, 1916. Serial No. 96,898. PUBLISHED SEPTEMBER 5, 1916.

113,899. CERTAIN NAMED DINING-ROOM FURNITURE. THE NEWARK OHIO FURNITURE Co., Newark, Ohio.
Filed June 13, 1916. Serial No. 95,849. PUBLISHED SEPTEMBER 5, 1916.

113,900. BEER. NORTH AMERICAN BREWING COMPANY, New York and Brooklyn, N. Y.
Filed August 8, 1916. Serial No. 97,169. PUBLISHED SEPTEMBER 5, 1916.

113,901. CERTAIN FORMULA OF SOLDER KNOWN AS BRAZING-SOLDER, SPELTER-SOLDER, AND BRAZING-SPELTER. NORTH AMERICAN SMELTING Co. INC., Philadelphia, Pa.
Filed October 11, 1915. Serial No. 89,805. PUBLISHED SEPTEMBER 5, 1916.

113,902. CARBONATED NON-ALCOHOLIC BEVERAGE SOLD AS A SOFT DRINK, AND SYRUPS FOR MAKING SAME. ORANGE CRUSH Co., Chicago, Ill.
Filed August 10,1916. Serial No. 97,252. PUBLISHED SEPTEMBER 5, 1916.

113,903. DITCHERS AND GRADERS. OWENSBORO DITCHER & GRADER Co., Owensboro, Ky.
Filed July 25, 1916. Serial No. 96,848. PUBLISHED SEPTEMBER 5, 1916.

113,904. OINTMENTS, TONIC AND ANTISEPTIC SOLUTIONS USED EXTERNALLY IN TREATING DISEASES AND INJURIES TO THE SKIN. JAMES D. PARK, Duluth, Minn.
Filed June 9, 1916. Serial No. 95,758. PUBLISHED SEPTEMBER 5, 1916.

113,905. WRITING AND PRINTING PAPERS KNOWN AS BOND, LINEN, AND LEDGER. PARSONS PAPER COMPANY, Holyoke, Mass.
Filed February 1, 1915. Serial No. 84,248. PUBLISHED JUNE 1, 1915.

113,906. LIQUID CHEMICAL PREPARATION FOR USE AS A HARDENER OF CEMENT SURFACES. PATTON PAINT COMPANY, Milwaukee, Wis.
Filed July 21, 1916. Serial No. 96,723. PUBLISHED SEPTEMBER 5, 1916.

113,907. MEDICINAL PREPARATION FOR RELIEF OF DISEASES AND DISORDERS OF CERTAIN ORGANS AND ANALOGOUS AILMENTS. S. PFEIFFER MANUFACTURING COMPANY, St. Louis, Mo.
Filed June 22, 1916. Serial No. 96,063. PUBLISHED SEPTEMBER 5, 1916.

113,908. BEVERAGES MADE OF MALT, HOPS, AND OTHER INGREDIENTS. THE PILSENER BREWING COMPANY, Cleveland, Ohio.
Filed August 10, 1916. Serial No. 97,255. PUBLISHED SEPTEMBER 5, 1916.

113,909. BASE-BALL GLOVES. A. J. REACH COMPANY, Philadelphia, Pa.
Filed May 15, 1916. Serial No. 95,155. PUBLISHED SEPTEMBER 5, 1916.

113,910. CERTAIN NAMED WEARING-APPAREL AND FURNISHINGS FOR MEN, WOMEN, AND CHILDREN. ROBERT REIS & Co., New York, N. Y.
Filed June 12, 1916. Serial No. 95,820. PUBLISHED JULY 25, 1916.

113,911. FACIAL LOTION. MARY A. ROBINSON, Detroit, Mich.
Filed July 22, 1916. Serial No. 96,767. PUBLISHED SEPTEMBER 5, 1916.

113,912. RHEUMATISM REMEDY. ANTHONY ROMANO, Troy and Buffalo, N. Y.
Filed August 7, 1916. Serial No. 97,149. PUBLISHED SEPTEMBER 5, 1916.

113,913. PHARMACEUTICAL PREPARATION FOR USE IN ECZEMATOUS AND ALLIED AFFLICTIONS OF THE SKIN. ROYAL REMEDIES COMPANY, Waukegan, Ill.
Filed July 22, 1916. Serial No. 96,764. PUBLISHED SEPTEMBER 5, 1916.

113,914. SEAMLESS FOUNTAIN-SYRINGES AND NO-SEAM WATER-BOTTLES. THE RUBBER PRODUCTS COMPANY, Barberton, Ohio.
Filed July 24, 1916. Serial No. 96,803. PUBLISHED SEPTEMBER 5, 1916.

113,915. PILLS, WHICH ARE ADMINISTERED FOR BILIOUSNESS, TORPID LIVER, CONSTIPATION, HEADACHE, AND ALL LIVER TROUBLES. JOHN A. SALTER, Vicksburg, Miss.
Filed July 26, 1916. Serial No. 96,881. PUBLISHED SEPTEMBER 5, 1916.

113,916. HORSE-COLLARS, HARNESS, AND RIDING-SADDLES. SCHEFFER & ROSSUM COMPANY, St. Paul, Minn.
Filed March 29, 1915. Serial No. 85,526. PUBLISHED MAY 18, 1915.

113,917. PEN AND POCKET KNIVES. SCHMACHTENBERG BROS., INC., New York, N. Y.
Filed May 8, 1916. Serial No. 94,995. PUBLISHED SEPTEMBER 5, 1916.

113,918. POCKET-KNIVES AND SCISSORS. SCHMACHTENBERG BROS., INC., New York, N. Y.
Filed May 8, 1916. Serial No. 94,996. PUBLISHED SEPTEMBER 5, 1916.

113,919. PHARMACEUTICAL PRODUCT USED INTERNALLY AND EXTERNALLY FOR CERTAIN DISEASES. SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland.
Filed July 15, 1916. Serial No. 96,603. PUBLISHED SEPTEMBER 5, 1916.

113,920. MATTRESSES. SOUTHERN BEDDING MANUFACTURING CO., Austin, Tex.
Filed January 14, 1916. Serial No. 92,142. PUBLISHED SEPTEMBER 5, 1916.

113,921. READY-MIXED PAINT. STAR PRODUCTS CO., Chicago, Ill.
Filed June 17, 1916. Serial No. 95,952. PUBLISHED SEPTEMBER 5, 1916.

113,922. ECZEMA REMEDIES. HARRY M. SWARTLEY, Charleston, S. C.
Filed April 5, 1916. Serial No. 94,176. PUBLISHED SEPTEMBER 5, 1916.

113,923. TOILET CREAMS. RALPH A. SWEET, Binghamton, N. Y.
Filed July 12, 1916. Serial No. 96,533. PUBLISHED SEPTEMBER 5, 1916.

113,924. ROASTED COFFEE. TILLMANN & BENDEL, San Francisco, Cal.
Filed November 18, 1915. Serial No. 90,741. PUBLISHED FEBRUARY 1, 1916.

113,925. LOAD-INDICATING MECHANISMS FOR VEHICLES. FREDERICK J. TROLL, Baltimore, Md.
Filed July 17, 1915. Serial No. 87,997. PUBLISHED SEPTEMBER 5, 1916.

113,926. NURSING-NIPPLES. THE VANT WOUD RUBBER CO., Brooklyn, N. Y.
Filed December 1, 1915. Serial No. 91,088. PUBLISHED SEPTEMBER 5, 1916.

113,927. MINERAL FLUID TONIC. VITAL REMEDIES COMPANY, Houston, Tex.
Filed July 1, 1916. Serial No. 96,282. PUBLISHED SEPTEMBER 5, 1916.

113,928. CERTAIN NAMED FURNITURE. CHESTER J. WADSWORTH, Painesville, Ohio.
Filed May 20, 1916. Serial No. 95,315. PUBLISHED SEPTEMBER 5, 1916.

113,929. CERTAIN NAMED FURNITURE. THE WILLOWCRAFT SHOPS, Cambridge, Mass.
Filed July 3, 1916. Serial No. 96,308. PUBLISHED SEPTEMBER 5, 1916.

113,930. WHISKY. WOMACK BROS., Fort Worth, Tex.
Filed August 11, 1916. Serial No. 97,287. PUBLISHED SEPTEMBER 5, 1916.

LABELS

REGISTERED NOVEMBER 7, 1916.

19,718.—*Title:* "UNCLE SAM." (For Union-Suits.) THE ARGYLE CO., New York, N. Y. Filed Oct. 4, 1916.

19,719.—*Title:* "ANNETTE KELLERMANN CHILL-OFF BEACH CAPE." (For Bathing-Capes.) LEONARD C. ASCH, New York, N. Y. Filed October 12, 1916.

19,720.—*Title:* "BEECH-NUT BRAND MINTS." (For Candies and Confections.) BEECH-NUT PACKING COMPANY, Canajoharie, N. Y. Filed August 10, 1916.

19,721.—*Title:* "BEECH-NUT BRAND WINTERGREENS." (For Wintergreen-Flavored Candies and Confections.) BEECH-NUT PACKING COMPANY, Canajoharie, N. Y. Filed August 16, 1916.

19,722.—*Title:* "BEECH-NUT BRAND CHEWING GUM." (For Chewing-Gum.) BEECH-NUT PACKING COMPANY, Canajoharie, N. Y. Filed August 19, 1916.

19,723.—*Title:* "BEECH-NUT BRAND CHEWING GUM." (For Chewing-Gum.) BEECH-NUT PACKING COMPANY, Canajoharie, N. Y. Filed August 22, 1916.

19,724.—*Title:* "A G." (For Goldwasser.) ADOLF GRUNBAUM, New York, N. Y. Filed September 27, 1916.

19,725.—*Title:* "COFFEE." (For Coffee.) B. FISCHER & Co., New York, N. Y. Filed September 27, 1916.

19,726.—*Title:* "EXCELLENT HAIR GROWER." (For a Hair-Grower.) BERTHA GREENE, Sheepshead Bay, N. Y. Filed April 20, 1916.

19,727.—*Title:* "TAFIMALTS." (For Candy.) GEO. HAAS & SONS, San Francisco, Cal. Filed October 23, 1916.

19,728.—*Title:* "TURKEY RED." (For Hard-Wheat Flour.) HANNAH & LAY COMPANY, Traverse City, Mich. Filed October 4, 1916.

19,729.—*Title:* "DOLORA." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed August 18, 1916.

19,730.—*Title:* "SS SPECIAL." (For Whisky.) JOSSELSON BROS., Catlettsburg, Ky. Filed October 2, 1916.

19,731.—*Title:* "GREAT BIG BAKED POTATO." (For Packages of Candy.) KOENIG CANDY COMPANY, Seattle, Wash. Filed August 10, 1916.

19,732.—*Title:* "McQUAY-NORRIS LEAK-PROOF PISTON RINGS." (For Piston-Rings.) McQUAY-NORRIS MFG. CO., St. Louis, Mo. Filed October 4, 1916.

19,733.—*Title:* "GASAID." (For a Substance to be Mixed with Gasolene.) THE PITCHFORD CHEMICAL LABORATORIES, Tacoma, Wash. Filed October 2, 1916.

19,734.—*Title:* "THE WONDER CORN SHIELD." (For Corn-Shields.) PAUL WETZEL, New Rochelle, N. Y. Filed September 2, 1916.

PRINTS

REGISTERED NOVEMBER 7, 1916.

4,546.—*Title:* "MAKE DELICIOUS ICE CREAM AND FROZEN DAINTIES WITH CARNATION MILK." (For Milk.) CARNATION MILK PRODUCTS COMPANY, Seattle, Wash. Filed September 14, 1916.

4,547.—*Title:* "AH'VE ALWAYS SAID, AND NOW REPEAT—MA HEALTH AM DUE TO CREAM O'WHEAT." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed October 20, 1916.

4,548.—*Title:* "GORDON CONVERTIBLE WINTER AND SUMMER TOP, GORDON SEAT COVERINGS, GORDON TIRE COVERS, GORDON RADIATOR AND ENGINE ROBE." (For Gordon Convertible Winter and Summer Tops, Gordon Seat-Coverings, Gordon Tire-Covers, and Gordon Radiator and Engine Robes.) THE J. P. GORDON COMPANY, Columbus, Ohio. Filed October 20, 1916.

4,549.—*Title:* "IT MAKES A DIFFERENCE." (For Oil.) INDIAN REFINING COMPANY, Augusta, Me., and New York, N. Y. Filed September 13, 1916.

4,550.—*Title:* "HAVE YOU HAD YOUR MORNING SIP?" (For Coffee.) ALEXANDER SHEPPARD & SONS, INC., Philadelphia, Pa. Filed October 6, 1916.

4,551.—*Title:* "GOLD NUGGETS." (For Popcorn Confections.) JOE H. SMITH, Upper Sandusky, Ohio. Filed October 18, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE UNITED DRUG COMPANY.

Decided October 13, 1916.

1. TRADE-MARKS—REGISTRABILITY—NAME OF CORPORATION ASSOCIATED WITH OTHER FEATURES.

A mark consisting of a double circle and a ring of seven infants' heads, inclosing the word "Stork," in heavy script, *Held* registrable, notwithstanding that the word "Stork" alone had previously been refused on the ground that it was the name of a corporation other than the applicant.

2. SAME—SAME—SAME.

A distinction should be drawn between names of corporations, which are also common English words, and names coined for the purposes of the corporation and which are therefore merely the name of the corporation.

ON APPEAL.

TRADE-MARK FOR RUBBER NIPPLES.

Mr. Alexander W. Murray for the applicant.

CLAY, *Assistant Commissioner:*

The applicant appeals from the ruling of the Examiner of Trade-Marks, refusing registry of a trade-mark for infants' rubber nipples, consisting of a double circle and ring of seven infants' heads, inclosing the word "Stork," written in heavy script.

The rejection is on the ground that the Commissioner and the Court of Appeals of the District of Columbia had previously refused registry of the word "Stork" on the ground that the word was the principal part of the name of a corporation existing prior to July, 1912, when the applicant alleges it began the use of its mark.

It appears in the file of this application that the applicant originally applied for registry of the word "Stork" alone. A search in the class failing to show that the mark was anticipated, it was passed to registry January 19, 1915, published February 2, 1915, and the thirty days thereafter allowed for filing opposition passed without any opposition developing. On March 15, 1915, the case was reconsidered by the Examiner, whose attention had meantime been directed to the fact that there was a corporation in the State of Maine called "The Stork Company," and registration was refused on the ground that the mark was the name of that company, under the ruling of the court in the case of *The Asbestone Company* v. *The Philip Carey Manufacturing Company*, (200 O. G., 857; 41 App. D. C., 507.) Appeals were taken to the Commissioner and then to the court, with the result of affirmance of the Examiner's position by both tribunals. A perusal of the briefs and the decisions of the First Assistant Commissioner and of the court (222 O. G., 729) makes it plain that the applicant's mark offered for registry was considered to be the mere name of The Stork Company, the court saying:

> The corporate name of The Stork Company is protected by the express provisions of the Trade-Mark Act.

Afterward the applicant amended its drawing and virtually applied anew to register the trade-mark in the form as now presented and above described. The question, then, is whether the ruling now must follow the ruling in the previous proceedings and whether there is any legal ground for refusing registration. For the solution of both questions it is necessary to carefully note the language of the statute.

An officer charged with the administration of the law is bound to construe it according to his conscience and according to the evident intent of the legislature. Obviously the intent of the lawmaker may be deduced from a history of the law and the reasons for its enactment. Both the congressional committees which favorably reported the bill which became the trade-mark law of February 20, 1905, reported after an exhaustive inquiry by themselves and by a special expert committee appointed for the purpose, (Senate Report 3278, January 24, 1905,) giving reasons.

The immediate occasion for the law was the obligation to carry out the provisions of certain treaties; but the committee refers to past complaints about the difficulty of registering trade-marks and says it was also the intention to give a wide latitude to registry.

> "Section 5 of the proposed bill we believe will permit the registration of all marks which could, under the common law as expounded by the courts, be the subject of a trade-mark and become the exclusive property of the party using the same as his trade-mark."

Section 5 of this bill, being in essence as it was drawn by Mr. Greeley, was, according to Mr. Greeley's report, drawn for the purpose of registering—

> all marks which would or could, under the law as construed by the Supreme Court, be held to be capable of being appropriated as the exclusive property of the person using them as trade-marks. * * * The second proviso is in recognition of the statement made by the Supreme Court in *Canal Company* v. *Clark*, (13 Wall., 311,) quoting from the opinion of Judge Duer in the case of *Amoskeag Manufacturing Company* v. *Spear*, that "[one] has no right to appropriate a sign or symbol, which, from the nature of the fact it is used to signify, others may employ with equal truth, and therefore have an equal right to employ for the same purpose," * * * etc.

Mr. Greeley's draft differed from the section as adopted on the point of interest only by change of

forms of expression and by adding to the prohibition against the registry of a mark which consists merely in a name not distinctively displayed the further exception—

or in association with a portrait of the individual.

Now it will be noted that the section is a law restricting the Commissioner's power of refusal to register. So far as we are now concerned with it, and omitting surplusage, it says that no distinctive trade-mark shall be refused registry unless it consists merely in the name of an individual not distinctively displayed.

The subsequent amendments of the law make this meaning more clear. For example, it was afterward found necessary to add to the exception of marks scandalous by reason of being immoral or being public insignia, also previously-used signs of fraternal societies, institutions, etc. The importance of comparative rights by user was originally emphasized by the provision that a then ten-year-old mark might be registered, notwithstanding it came within the previous prohibitions. On February 5, 1911, there was added to the statute these words:

Provided further, That nothing herein shall prevent the registration of a trade-mark otherwise registrable because of its being the name of the applicant or a portion thereof.

This extra proviso was occasioned by the ruling of the court in such cases as *in re Success Co.*, (34 App. D. C., 443; 152 O. G., 958, February 1, 1910,) that—

the word "merely" as used in the statute was clearly intended to prevent the registration by a corporation of its own name.

If it were proposed to register a word which was the property of another as being that other's peculiar name, that and nothing more, there would be no difficulty in deciding against registry; but here we have a different case, because the word in question was not the property of any particular other person, but was a word in wide and various use not only as a surname and not only as the name of a famous bird, but as an actual trade-mark. The name "Stork" generally is not the property of the corporation Stork Company, simply because it is equally the property of others. The directories of the large cities of the country show the name to be a very common family name, occurring, for example, scores of times in the cities of Philadelphia, Baltimore, St. Louis, Chicago, New York, and Cleveland. It is of course a well-known name of a bird and of a bird having such mythical associations as to be virtually a term indicative of the occasion of birth, as Santa Claus is associated with the Christmas festival.

The name "Stork" is the name of the corporation not in the sense of being its property generally, but only in the sense of its particular use of it, just as the applicant here has as its name the word "United" and the word "Drug" without any property rights in either word.

Obviously there could be no just claim that the Stork Company had the exclusive right to use of its name. The particular question is not the right to exclusive use of the name, but the right of another to use and register the name. Under the statute The Stork Company can register its name as a trade-mark indefinitely. If others cannot, this amounts in effect to giving it a monopoly of the name. A natural person whose name was Stork could not claim this extraordinary right, and it is difficult to understand how an artificial person could have such superhuman privilege. It is thus necessary to draw a sharp distinction between a name coined or created, or preëmpted by first and sole use, and a name which is merely withdrawn from the public domain for specific use. The word "Asbestone" was the property of the Asbestone Company, and was the mere name of that company, for that company had created the name. But there is no such or similar condition in this case.

There is on file in this Office a copy, certified by the Secretary of State of Maine on January 5, 1905, of the certificate of incorporation on December 2, 1904, of a company known as The Stork Company, organized to manufacture "waterproof cloths, fabrics," etc. There is also on file Trade-Mark Certificate No. 90,254, of February 11, 1913, showing that this company used a mark consisting of the word "Stork" and the picture of a stork, for baby-shoes, in 1906, and claims to own the previously-registered mark, No. 65,946, of June 23, 1908, showing the same mark in different form; also, Certificate No. 88,534, of September 24, 1912, showing the word "Stork" and a different picture of the bird, as used for soap. This evidence that there was a corporation of this name twelve years ago and that as late as three years ago such a company was dealing in baby-shoes and soap does not seem sufficient to raise any question of any rivalry in goods, and the only question that remains is whether registry can be refused because the mark proposed for registry *contains*, among other things, a word which also is the name of a person and of a previously-existing corporation.

It also appears from the records of this Office that the word "Stork" or the picture of a stork has been registered as a trade-mark some sixty times, and, among others, it had been used prior to the incorporation of The Stork Company for vermifuge, (1886,) for flannels, (1896,) for condensed milk, (1898,) for morning-sickness tablets, (1901,) and for medicines (1902.) All of these things pertain in some way to infants. And since the incorporation of The Stork Company there have been registrations for toilet powder, (No. 50,800,) for infants' hats and caps, (No. 49,386,) for baby chicks, (No. 109,524,) and for baby-carriages, (No. 95,933.) That The Stork Company not only has no right, but cannot have the exclusive use of the word "Stork" even as a trade-mark, is obvious from the fact that others have used it as a trade-mark for goods pertaining to childhood, and that this practice, beginning long before The Stork Company existed, has continued since The Stork Company's use of the same word without objection from The Stork Company. Under these circumstances I am unable to believe that the court by any previous de-

cision has intended to hold that by indirection The Stork Company may monopolize the name, which seems to be the inevitable effect of refusing registry to any mark which contains the word "Stork."

What the Examiner had held virtually amounts to ruling that a ring of infants' heads is the name of a corporation. Either this, or else he has not only read entirely out of the statute the word "*merely*," but has gone a step further and read into the statute a substitution of the word "includes" for the word "*consists*." This Office can take no such liberties with the law. Whether or not it is true, as alleged in the brief, that the court has read out of the law the word "merely," makes no difference with this case, for what is here held is that the trade-mark now proffered for registry is not the name of a corporation at all, for the double reason that it consists quite as much in the circle of infants' heads as it consists in the word "Stork" and that the word "Stork" has been so long public property that it is not in any way peculiar to the corporation in the State of Maine.

The Examiner's ruling is reversed, and the mark is admitted for registry.

ADJUDICATED PATENTS.

(U. S. D. C.) The Casgrain patent, No. 864,951, for a machine for nailing shoe soles and heels, *Held* not anticipated, valid, and infringed. *United Shoe Machinery Co.* v. *Farmington Shoe Mfg. Co.*, 235 Fed. Rep., 139.

(U. S. D. C.) The Day patent, No. 727,597, for an automatic watering device for chicks, *Held* not anticipated, valid, and infringed. *Day* v. *Aabling-Ebright Seed Co.*, 235 Fed. Rep., 171.

(U. S. D. C.) The Dean patent, No. 1,105,324, for an electric horn, *Held* void for lack of invention. *Lovell-McConnell Mfg. Co.* v. *General Automobile Supply Co.*, 235 Fed. Rep., 169.

(U. S. C. C. A.) The Joy patent, No. 780,664, for a printing-telegraph receiver, claim 12 *Held* not infringed. *Page Mach. Co.* v. *Dow, Jones & Co.*, 235 Fed. Rep., 121.

(U. S. D. C.) The Myers patent, No. 1,099,715, for an automobile-headlight, *Held* not infringed. *Quinn* v. *J. H. Faw, Inc.*, 235 Fed. Rep., 166.

(U. S. D. C.) The Russell reissue patent, No. 11,282, (original No. 445,235,) for a pulp-digester, *Held* infringed. *American Sulphite Pulp Co.* v. *Hinckley Fibre Co.*, 235 Fed. Rep., 173.

(U. S. C. C. A.) The Spahr and Stichler patent, No. 948,773, for a gas sad-iron, construed in view of the limitations imposed by the Patent Office, *Held* not infringed. *Strause Gas Iron Co.* v. *William M. Crane Co.*, 235 Fed. Rep., 126.

(U. S. C. C. A.) The Spahr and Stichler design patent, No. 42,443, for a design for a sad-iron, *Held* void for lack of invention. *Strause Gas Iron Co.* v. *William M. Crane Co.*, 235 Fed. Rep., 126.

(U. S. D. C.) The Thacher patent, No. 617,615, for a concrete arch, *Held* void because the alleged invention was previously described in a printed publication. *Thacher* v. *Inhabitants of Town of Falmouth*, 235 Fed. Rep., 151.

(U. S. C. C. A.) The Van Kannel patent, No. 656,062, for a revolving door, *Held* valid and infringed. *Van Kannel Revolving Door Co.* v. *Straus*, 235 Fed. Rep., 135.

(U. S. D. C.) The Ward patent, No. 737,179, for improvement in screw-drivers, *Held* limited, in view of proceedings in Patent Office and prior state of art, and as limited not infringed. *H. D. Smith & Co.* v. *Southington Mfg. Co.*, 235 Fed. Rep., 160.

(U. S. C. C. A.) The Williams patent, No. 873,399, for a heating and ventilating system for automobiles, *Held* not infringed. *Pelton* v. *Williams*, 235 Fed. Rep., 131.

ISSUE OF NOVEMBER 7, 1916.

Patents	826—No.	1,203,561 to No. 1,204,386, inclusive.
Designs	34—No.	49,841 to No. 49,874, inclusive.
Trade-Marks	80—No.	113,851 to No. 113,930, inclusive.
Labels	17—No.	19,718 to No. 19,734, inclusive.
Prints	6—No.	4,546 to No. 4,551, inclusive.
Reissues	2—No.	14,212 to No. 14,213, inclusive.
Total	965	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	North Carolina	2	.....
Arizona	2	.....	North Dakota	5	1
Arkansas	3	.....	Ohio	48	9
California	26	4	Oklahoma	6	1
Colorado	5	1	Oregon	6	1
Connecticut	21	1	Pennsylvania	62	3
Delaware	2	.....	Rhode Island	12	.....
Florida	4	.....	South Carolina	2	1
Georgia	6	1	South Dakota	5	.....
Idaho	1	.....	Tennessee	6	1
Illinois	75	11	Texas	20	4
Indiana	7	2	Utah	.....	.....
Iowa	19	.....	Vermont	2	.....
Kansas	8	.....	Virginia	2	.....
Kentucky	5	2	Washington	16	3
Louisiana	5	1	West Virginia	3	.....
Maine	2	2	Wisconsin	27	2
Maryland	6	2	Wyoming	1	.....
Massachusetts	46	2			
Michigan	36	3	Alaska, District of	.....	.....
Minnesota	11	3	Canal Zone	.....	.....
Mississippi	2	1	District of Columbia	8	.....
Missouri	18	4	Hawaii Territory	1	.....
Montana	4	.....	Philippine Islands	.....	.....
Nebraska	10	1	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	1	.....
New Jersey	48	1			
New Mexico	.....	.....	Total to residents		
New York	179	31	of the United States.	791	99

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	.....	Netherlands	2	.....
Belgium	.....	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	2	.....
Canada	13	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	1	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	.....	.....
Denmark	1	.....	South Australia	.....	.....
England	24	1	Spain	.....	.....
Finland	.....	.....	Sweden	1	.....
France	3	.....	Switzerland	4	2
Germany	9	.....	Tunis	.....	.....
Greece	.....	.....	Victoria	2	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	4	.....	Total to residents of foreign countries	69	3
Japan	.....	.....			
Mexico	.....	.....			

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 27, 1916.

The Hughes Anti-Friction Company, its assigns or legal representatives, take notice:

A cancelation proceeding having been instituted by this Office upon the application of The Ironsides Company, of Columbus, Ohio, to effect the cancelation of the trade-mark registration of The Hughes Anti-Friction Company, of Boston, Mass., No. 44,340, dated March 21, 1905, and the notice of such proceeding sent by registered mail to the said The Hughes Anti-Friction Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Hughes Anti-Friction Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will be proceeded with as in case of default.

The notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 21, 1916.

Advanced Beet Sugar Construction Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Sherer-Gillett Company, 1705 South Clark street, Chicago, Ill., for registration of a trade-mark and trade-mark registered January 9, 1900, No. 34,024, to the Advanced Beet Sugar Construction Company, of No. 1133 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to the said Advanced Beet Sugar Construction Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Advanced Beet Sugar Construction Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 20, 1916.

J. J. Turner & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Hampton Guano Company, Dickinson Building, Norfolk, Va., for registration of a trade-mark and trade-mark registered March 23, 1897, No. 29,734, to J. J. Turner & Co., of 602 East Pratt street, Baltimore, Md., and a notice of such declaration sent by registered mail to said J. J. Turner & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said J. J. Turner & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 18, 1916.

The T. W. Armstrong Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Willson Bros., of Edgerton, Wis., for registration of a trade-mark and trade-mark registered January 14, 1908, No. 67,008, to The T. W. Armstrong Co., of 120 Liberty street, New York, N. Y. A notice of such declaration sent by registered mail to said The T. W. Armstrong Co. at the said address has been returned by the post-office undeliverable.

The assignment records of the Office show a transfer of this registration to The Consolidated Chemical Co., of Detroit, Mich. The Office has been unable to secure satisfactory service upon this party.

Notice is hereby given that unless The T. W. Armstrong Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 7TH DAY OF NOVEMBER, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

Aaron, Max N., assignor to Friedberger-Aaron Manufacturing Company, Philadelphia, Pa. Lace edging. No. 1,203,561; Nov. 7; Gaz. vol. 232; p. 3.

Abbate, Nicholas G., Baltimore, Md. Comb. No. 1,204,230; Nov. 7; Gaz. vol. 232; p. 237.

Acme Universal Joint Company. (See Rhodes, Bert O., assignor.)

Acomb, F. G., *et al.* (See Lord, Lewis P., assignor.)

Adair, Adolphus G., Seattle, Wash. Rail-spike. No. 1,204,330; Nov. 7; Gaz. vol. 232; p. 270.

Adams, Benjamin D., Galesburg, Ill. Automobile-accelerator pedal. No. 1,203,955; Nov. 7; Gaz. vol. 232; p. 143.

Adamson, Lee H., Rogers, Ark. Extensible holder. No. 1,203,562; Nov. 7; Gaz. vol. 232; p. 3.

Adder Machine Company, The. (See Schleicher and Wilgus, assignors.)

Addressograph Company. (See Duncan, Joseph S., assignor.)

Addressograph Company. (See Wright, Walter, assignor.)

Aird, William, Barrie, Ontario, Canada. Air-valve for internal-combustion engines. No. 1,204,110; Nov. 7; Gaz. vol. 232; p. 196.

Airesman, Samuel E. (See Gilmer, John T., assignor.)

Albanese, Giuseppe S., Paris, France, assignor to E. L. Noble, Brooklyn, N. Y. Brake mechanism for vehicles. No. 1,203,956; Nov. 7; Gaz. vol. 232; p. 143.

Albert T. Otto & Sons. (See Contal, Camille, assignor.)

Alderson, Willon P., Timmins, Ontario, Canada. Amalgamator. No. 1,204,231; Nov. 7; Gaz. vol. 232; p. 238.

Alexander, Jesse, New York, N. Y. Type-writing machine. No. 1,203,836; Nov. 7; Gaz. vol. 232; p. 99.

Alexander, Jesse, New York, N. Y. Type-writing-machine key and type-bar action. No. 1,203,837; Nov. 7; Gaz. vol. 232; p. 100.

Allen, Charles H. (See Bartholomew and Allen.)

Allis-Chalmers Manufacturing Company. (See Newhouse, Ray C., assignor.)

Allis-Chalmers Manufacturing Company. (See Trout, William H., assignor.)

American Aluminum Ware Company. (See Nash, Thomas J., assignor.)

American Can Company. (See Glotzbach, George J., assignor.)

American Can Company. (See Hodgson, John G., assignor.)

American Can Company. (See Snyder, Vernon C., assignor.)

American Can Company. (See Wood, Frederick P., assignor.)

American Key Can Company. (See McColl, Francis P., assignor.)

American La France Fire Engine Company. (See McCaslin, Harry M., assignor.)

American Locomotive Company. (See Woodard, William E., assignor.)

American Multigraph Company, The. (See Neidich, Samuel A., assignor.)

American Sales Book Company. (See Doughty, George E., assignor.)

American Steam Gauge & Valve Manufacturing Co. (See Collette, Austin B., assignor.)

American Valve & Meter Company, The. (See Anderson, Frank C., assignor.)

Anderson, Andrew, West Brighton, N. Y. Pneumatic-tire-inflating device. No. 1,204,232; Nov. 7; Gaz. vol. 232; p. 238.

Anderson, Arthur L., Los Angeles, Cal. Malted-milk dispenser. No. 1,204,111; Nov. 7; Gaz. vol. 232; p. 196.

Anderson, Frank C., assignor to The American Valve & Meter Company, Cincinnati, Ohio. Interlocking and target-operating switch-stand. No. 1,204,112; Nov. 7; Gaz. vol. 232; p. 197.

Anderson, Gustaf, Lynn, Mass. Device for converting motion. No. 1,203,563; Nov. 7; Gaz. vol. 232; p. 3.

Anderson, John, Portland, Conn. Vehicle-axle. No. 1,203,957; Nov. 7; Gaz. vol. 232; p. 143.

Anderson, Nils H., assignor to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,203,683; Nov. 7; Gaz. vol. 232; p. 47.

Anderson, Samuel, Pawtucket, R. I. Snap or catch. No. 1,203,958; Nov. 7; Gaz. vol. 232; p. 143.

Andrews, Edwin N., Fort Dodge, Iowa. Shoe-sewing-machine attachment. No. 1,203,838; Nov. 7; Gaz. vol. 232; p. 100.

Andrews, George R., East Saginaw, Mich. Egg-carrier. No. 1,204,233; Nov. 7; Gaz. vol. 232; p. 238.

Andrews, Roger W. (See Clark and Andrews.)

Angle, Edward H., New London, Conn. Orthodontic appliance. No. 1,204,113; Nov. 7; Gaz. vol. 232; p. 197.

Angle, Edward H., New London, Conn. Orthodontic appliance. No. 1,204,114; Nov. 7; Gaz. vol. 232; p. 198.

Annable, George A., assignor, by mesne assignments, to Sweets Catalogue Service Inc., New York, N. Y. Co-operative advertising. No. 1,204,331; Nov. 7; Gaz. vol. 232; p. 270.

April, Saul C., Newark, N. J. Base-ball mask. No. 1,203,564; Nov. 7; Gaz. vol. 232; p. 4.

Archambault, Arthur J., Chicago, Ill. Plumber's furnace. No. 1,203,839; Nov. 7; Gaz. vol. 232; p. 101.

Archer, Floyd P., Wilkes-Barre, Pa. Entrenching-tool. No. 1,204,332; Nov. 7; Gaz. vol. 232; p. 270.

Armour Fertilizer Works. (See Bishop, Earl S., assignor.)

Ashcroft, Edgar A., London, England. Apparatus for the electrolytic manufacture of light metals and reaction products thereof. No. 1,204,234; Nov. 7; Gaz. vol. 232; p. 239.

Ashe, Lauren. (See Kohman, Godfrey, and Ashe.)

Atkinson, Edward M., Portland, Oreg. Means for attaching handles to implements. No. 1,203,959; Nov. 7; Gaz. vol. 232; p. 144.

Atwood Machine Company, The. (See Bradley, Edward E., assignor.)

Austin, Frederick C. (See Bunnell, Morton G., assignor.)

Automatic Coinwrapping Company. (See Milligan, John F., assignor.)

Automatic Gas Power Company. (See Hardyman, Frank A., assignor.)

Ayotte, Joseph R., assignor to Rene Squeegee Company, Chicago, Ill. Window-cleaner. No. 1,203,684; Nov. 7; Gaz. vol. 232; p. 47.

B. S. Roy & Son Company. (See Roy, Sylvanus B., assignors.)

Babcock & Wilcox Company, The. (See Jacobus, David S., assignor.)

Bache, Leigh S., Middlesex borough, assignor of one-half to Bound Brook Oil-Less Bearing Company, Boundbrook, N. J. Oilless spindle. No. 1,204,115; Nov. 7; Gaz. vol. 232; p. 198.

Baer, Alfred. (See Cartwright and Baer.)

Bailey, Frank, Muskegon, Mich. Means for arresting the unwinding of awnings and shades. No. 1,203,840; Nov. 7; Gaz. vol. 232; p. 101.

Bailey, George W., Rochester, N. Y. Window-screen. No. 1,204,116; Nov. 7; Gaz. vol. 232; p. 198.

Bailey, Margaret, *et al.* (See Wales, Marie S., assignor.)

Bajma-Riva, Oreste, Milan, Italy. Wire-connector. No. 1,203,565; Nov. 7; Gaz. vol. 232; p. 4.

Baker, Charles, Bloomsburg, Pa. Reversible ratchet-wrench. No. 1,203,685; Nov. 7; Gaz. vol. 232; p. 48.

Baker Motor Vehicle Company, The. (See Gruenfeldt, Emil, assignor.)

Baker, William J. (See Schwarz and Baker.)

Baldwin Locomotive Works, The. (See Rushton, Kenneth, assignor.)

Bancel, Paul A., New York, N. Y. Centrifugal air-pump. No. 1,203,841; Nov. 7; Gaz. vol. 232; p. 102.

Barber, Lynn W., Hetland, S. D. Concentrator. No. 1,204,333; Nov. 7; Gaz. vol. 232; p. 271.

Barr, Galileo C., Oklahoma, Okla. Tail-lamp. No. 1,203,566; Nov. 7; Gaz. vol. 232; p. 4.

Bartholomew, William, and C. H. Allen, assignors to Troy Laundry Machinery Company, Ltd., Chicago, Ill. Electrically-operated centrifugal extractor. No. 1,203,567; Nov. 7; Gaz. vol. 232; p. 4.

Bartlett, William H. (See Freeman, Harry G., assignor.)

Bastian, Charles O., and A. E. Salisbury, London, England, assignors to Cooper Hewitt Electric Company, Hoboken, N. J. Mercury-vapor-arc lamp. No. 1,204,117; Nov. 7; Gaz. vol. 232; p. 198.

Batdorf, Charles S., Brooklyn, N. Y. Machine for banding bills and the like. No. 1,204,118; Nov. 7; Gaz. vol. 232; p. 199.

Bates, Chauncey A., and W. W. Hobby, White Plains, N. Y. Window-screen. No. 1,204,235; Nov. 7; Gaz. vol. 232; p. 239.
Batsner, Alexander G., Cincinnati, Ohio. Combined engine-starting and gear-shifting apparatus. No. 1,203,568; Nov. 7; Gaz. vol. 232; p. 5.
Bausch & Lomb Optical Company. (See Kellner, Gustav A. H., assignor.)
Baxter, Edwin D., assignor to The Baxter Stove Company, Mansfield, Ohio. Burner and oven. No. 1,203,960; Nov. 7; Gaz. vol. 232; p. 144.
Baxter Stove Company, The. (See Baxter, Edwin D., assignor).
Bayles, Maynard A., *et al.* (See Maxwell, George S., assignor).
Bazeley, Arthur J., assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,204,119; Nov. 7; Gaz. vol. 232; p. 199.
Bazeley, Arthur J., Cleveland, Ohio, assignor to The National Malleable Castings Company. Car-coupling. No. 1,204,334; Nov. 7; Gaz. vol. 232; p. 271.
Beadle, George W., assignor to The Single Service Package Corporation, New York, N. Y. Paper vessel. No. 1,203,569; Nov. 7; Gaz. vol. 232; p. 5.
Bean, Andrew W. (See Killinger and Bean.)
Beardsley, Leroy L., Forgan, Okla. Kafir-corn header. No. 1,203,961; Nov. 7; Gaz. vol. 232; p. 144.
Beaubien, Robert E., Chicago, Ill. Key-top for typewriters. No. 1,203,570; Nov. 7; Gaz. vol. 232; p. 5.
Beausejour, Reme A., Brooklyn, assignor to Standard Varnish Works, New York, N. Y. Liquid-coating machine. No. 1,204,120; Nov. 7; Gaz. vol. 232; p. 200.
Beaver Dam Manufacturing Co. (See Offerman, Joseph P., assignor.)
Becker, Christopher A., assignor to The Torsion Balance Company, New York, N. Y. Weighing-scale. No. 1,203,686. Nov. 7; Gaz. vol. 232; p. 48.
Becker, Friederich W., New Athens, Ill. Washboard-protector. No. 1,204,335; Nov. 7; Gaz. vol. 232; p. 272.
Begg, George B., New Orleans, La. Track-cleaner. No. 1,204,236; Nov. 7; Gaz. vol. 232; p. 239.
Bellamore, David H., assignor to the Standard Ordnance Corporation, New York, N. Y. Armored vehicle. No. 1,203,962; Nov. 7; Gaz. vol. 232; p. 144.
Bemis, William E., assignor to Standard Oil Company of New York, New York, N. Y. Metallic barrel. No. 1,203,687; Nov. 7; Gaz. vol. 232; p. 48.
Benjamin Electric Manufacturing Company. (See Tregoning, William C., assignor.)
Benjamin, John M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Last-pulling machine. No. 1,203,571. Nov. 7; Gaz. vol. 232; p. 6.
Bentley, Robert I., Jr., assignor to Muirson Label Company, San Jose, Cal. Display-package. No. 1,203,963; Nov. 7; Gaz. vol. 232; p. 145.
Berbecker & Rowland Manufacturing Company. (See Miller, Charles B., assignor.)
Bergh, Frederick P., H. J. Loebinger, and H. C. Neuberger, assignors, by mesne assignments, to General Reduction Company, New York, N. Y. Apparatus for the evaporation of fluids. No. 1,204,121; Nov. 7; Gaz. vol. 232; p. 200.
Betts, Charles F., North Finchley, London, assignor to Dental Manufacturing Co., Ltd., London, England. Dental chair. No. 1,203,572; Nov. 7; Gaz. vol. 232; p. 6.
Beugler, Edwin F., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y. Barrel-hoop. No. 1,203,688; Nov. 7; Gaz. vol. 232; p. 49.
Bibb, George F. (See Carter and Bibb.)
Bickley Everett H., Pittsburgh, Pa. Cap for fountain or other syringes. No. 1,204,237; Nov. 7; Gaz. vol. 232; p. 239.
Biggert, Florence C., Jr., Crafton, assignor to United Engineering & Foundry Company, Pittsburgh, Pa. Clipping-shears. No. 1,203,842; Nov. 7; Gaz. vol. 232; p. 102.
Bilhorn, Peter P. (See Wick, George C., assignor.)
Bishop, Earl S., Pittsburgh, Pa., assignor to Armour Fertilizer Works, Chicago, Ill. Treatment of phosphate-rock. No. 1,204,238; Nov. 7; Gaz. vol. 232; p. 240.
Blackshear, Everard, Citra, Fla. Hair-curler. No. 1,203,964; Nov. 7; Gaz. vol. 232; p. 145.
Blake, William H., Jersey City, N. J. Pencil. No. 1,204,336; Nov. 7; Gaz. vol. 232; p. 272.
Blunt, David W., S. Cle Elum, and C. L. Kelso, Cle Elum, Wash. Hydraulic motor. No. 1,203,689; Nov. 7; Gaz. vol. 232; p. 49.
Blyler, L. F. *et al.* (See Lucas, John T., assignor.)
Boerner, Emile C. (See Ward, Remsen, and Boerner.)
Bogenberger, John, Milwaukee, Wis. Fire-door. No. 1,203,965; Nov. 7; Gaz. vol. 232; p. 145.
Bolin, Walter R., Brazil, Ind. Bag-holder. No. 1,203,843; Nov. 7; Gaz. vol. 232; p. 103.
Booth, Clement, Narberth, and A. C. Page, Philadelphia, Pa. Grinding-machine. No. 1,203,844; Nov. 7; Gaz. vol. 232; p. 103.
Borresen, Helge A., Marquette, Mich., assignor to M. W. Zabel, trustee, Chicago, Ill. Horological instrument. No. 1,203,690; Nov. 7; Gaz. vol. 232; p. 49.
Borson, Sophus P. C., Salida, Colo. Mining-machine. No. 1,203,573; Nov. 7; Gaz. vol. 232; p. 7.
Bound Brook Oil-Less Bearing Company. (See Bache, Leigh S., assignor.)
Bourn, Augustus O., Bristol, R. I. Vulcanization. No. 1,203,966; Nov. 7; Gaz. vol. 232; p. 145.
Bowers, Benjamin S., Laprairie, Minn. Advertising toy. No. 1,203,967; Nov. 7; Gaz. vol. 232; p. 145.
Bowman, Irwin C., Chicago, Ill. Wind-shield protector. No. 1,204,122; Nov. 7; Gaz. vol. 232; p. 201.
Box, Walter, Georgetown, Tex. Engine. No. 1,203,574; Nov. 7; Gaz. vol. 232; p. 7.
Bozard, Harrison B., La Crosse, Wis. Seeding-machine. No. 1,204,239; Nov. 7; Gaz. vol. 232; p. 240.
Bozard, Harrison B., La Crosse, Wis. Scraper for seeding-machines. No. 1,204,240; Nov. 7; Gaz. vol. 232; p. 240.
Bräcker, Karl, Jr., Belleville, N. J. Combination razor-strop hone. No. 1,203,691; Nov. 7; Gaz. vol. 232; p. 50.
Brackenbury, Edward W., assignor to T. L. Smith Company, Milwaukee, Wis. Mounting for drums of concrete-mixers. No. 1,203,575; Nov. 7; Gaz. vol. 232; p. 7.
Bradley, Edward E., assignor to The Atwood Machine Company, Stonington, Conn. Take-up mechanism for spinning, winding, or doubling machines. No. 1,204,123; Nov. 7; Gaz. vol. 232; p. 201.
Bradley, Richard C., assignor of one-fourth to L. Kinnebrew and one-fourth to J. M. Eastham, Shreveport, La., and one-fourth to C. F. Ireland, Houston, Tex. Dispensing apparatus. No. 1,204,241; Nov. 7; Gaz. vol. 232; p. 240.
Bradley, Richard C., assignor of one-fourth to L. Kinnebrew and one-fourth to J. M. Eastham, Shreveport, La., and one-fourth to C. F. Ireland, Houston, Tex. Liquid-dispensing apparatus. No. 1,204,242; Nov. 7; Gaz. vol. 232; p. 241.
Braine, Bancroft G., New York, N. Y., assignor to The Rail Joint Company. Insulated rail-joint. No. 1,204,124; Nov. 7; Gaz. vol. 232; p. 201.
Brasington, Charles N. (See Rivers, George W., assignor.)
Breitenstein, Edward, Newton, Kans. Tongue-support for vehicles. No. 1,204,243; Nov. 7; Gaz. vol. 232; p. 242.
Briles, James M., Victoria, Tex. Bench-clamp. No. 1,203,692; Nov. 7; Gaz. vol. 232; p. 50.
Brinton, William C., Jr., assignor to Philips-Brinton Company, Kennett Square, Pa. Electric-current distributer. No. 1,203,693; Nov. 7; Gaz. vol. 232; p. 50.
Broadhead, James E., Bay City, Mich. Trainman's flash-light. No. 1,203,576; Nov. 7; Gaz. vol. 232; p. 8.
Broady, Harry W., Bayside, assignor to The Lundin Company, Inc., Long Island City, N. Y. Process and product of treating wood. No. 1,203,577; Nov. 7; Gaz. vol. 232; p. 8.
Brooks, Robert A., Chicago, Ill. Surface discharge apparatus for tanks. No. 1,203,578; Nov. 7; Gaz. vol. 232; p. 8.
Brosnan, Edward J., Troy, N. Y. Bottle-stopper and dropper. No. 1,204,125; Nov. 7; Gaz. vol. 232; p. 201.
Brower, Roy F., Syracuse, N. Y. Shoe-ventilator. No. 1,203,694; Nov. 7; Gaz. vol. 232; p. 51.
Brown, Thomas E., New York, N. Y. Bascule-bridge. No. 1,203,695; Nov. 7; Gaz. vol. 232; p. 51.
Brubaker, Marcus W., Los Angeles, Cal. Hair-drying frame. No. 1,203,696; Nov. 7; Gaz. vol. 232; p. 51.
Brundage, Frank S. (See Hardman, George H., assignor.)
Bruns, William X., Chicago, Ill. Repair for tubing. No. 1,204,244; Nov. 7; Gaz. vol. 232; p. 242.
Buch, M. X., Detroit, assignor to H. E. Edwards, Jackson, Mich. Top for vehicles and the like. No. 1,204,337; Nov. 7; Gaz. vol. 232; p. 272.
Buhl, Carl H., Cleveland, Ohio. Automatic train-stop. No. 1,203,845; Nov. 7; Gaz. vol. 232; p. 103.
Bulla, Melbern B., El Paso, Tex. Cab-signal and automatic stop. No. 1,203,968; Nov. 7; Gaz. vol. 232; p. 146.
Bulla, Melbern B., El Paso, Tex. Automatic train-stop. No. 1,203,969; Nov. 7; Gaz. vol. 232; p. 146.
Bulla, Melbern B., El Paso, Tex. Automatic train-stop. No. 1,203,970; Nov. 7; Gaz. vol. 232; p. 146.
Bullock, Edward W. (See Gleason, Stewart, and Bullock.)
Bump, Alvah J., Cambridge, Ohio. Dust-pan. No. 1,203,697; Nov. 7; Gaz. vol. 232; p. 51.
Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Automatic window-locking device. No. 1,203,971; Nov. 7; Gaz. vol. 232; p. 147.
Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Rolling-window-screen-attaching device. No. 1,203,973; Nov. 7; Gaz. vol. 232; p. 147.
Bunnell, Morton G., assignor to New Era Mfg. Co., Chicago, Ill. Electrical switch. No. 1,203,972; Nov. 7; Gaz. vol. 232, p. 147.
Burdsall, Ellwood, assignor to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y. Nut-making machine. No. 1,203,698; Nov. 7; Gaz. vol. 232; p. 52.
Burke, William W., assignor to Cooper Manufacturing Company, Bennington, Vt. Electric-circuit-closing device. No. 1,203,699; Nov. 7; Gaz. vol. 232; p. 52.
Burtt, Frank, Kalamazoo, assignor of one-half to W. Kromdyke, Jr., Portage township, Mich. Driving or transmission gearing. No. 1,203,846; Nov. 7; Gaz. vol. 232; p. 104.
Butzer, Philip F., Boonville, Mo. Wire-fastener for posts. No. 1,204,126; Nov. 7; Gaz. vol. 232; p. 201.
Buxton, Warner R., Springfield, Mass. Foldable shoe-tree. No. 1,203,700; Nov. 7; Gaz. vol. 232; p. 53.
Cahill, Edward, New York, N. Y. Thermal-controlled shutter. No. 1,203,847; Nov. 7; Gaz. vol. 232; p. 104.

Cahill, Thomas J., Corpus Christi, Tex. Flush-valve. No. 1,204,338; Nov. 7; Gaz. vol. 232; p. 273.
Callon, Harry A., Indianapolis, Ind. Bath-tub shower and needle bath. No. 1,203,579; Nov. 7; Gaz. vol. 232; p. 9.
Callow, Joseph E., and D. Kroes, Milwaukee, Wis. Window-lock. No. 1,203,974; Nov. 7; Gaz. vol. 232; p. 148.
Canda, Ferdinand M., Plainfield, N. J. Process of and apparatus for forging balls. No. 1,204,127; Nov. 7; Gaz. vol. 232; p. 202.
Canniff, Isaac. (See Hickman and Canniff.)
Caplin, John. (See Robin and Caplin.)
Carborundum Company, The. (See Tone, Frank J., assignor.)
Carl, John H., Gilroy, Cal. Safety attachment for fire-arms. No. 1,203,848; Nov. 7; Gaz. vol. 232; p. 105.
Carlson, Albert, Seattle, Wash. Bench-plane guide. No. 1,204,128; Nov. 7; Gaz. vol. 232; p. 202.
Carlson, Frederick E., assignor to Landers, Frary & Clark, New Britain, Conn. Electrical heater. No. 1,203,975; Nov. 7; Gaz. vol. 232; p. 148.
Carlsson, Fritiof. (See Evers and Carlsson.)
Carlsson, Fritiof, assignor to Lidgerwood Manufacturing Company, New York, N. Y. Clutch device. No. 1,203,976; Nov. 7; Gaz. vol. 232; p. 148.
Carmer, James R., Wilmington, Del. Uncoupling-lever. No. 1,203,849; Nov. 7; Gaz. vol. 232; p. 105.
Carner, Leonard A., assignor of one-half to L. E. Johnson, Mountain View, Ark. Wrench. No. 1,204,129; Nov. 7; Gaz. vol. 232; p. 202.
Caron, Octave, assignor of one-fourth to E. W. Christopher, Scranton, N. D. Animal-poke. No. 1,203,701; Nov. 7; Gaz. vol. 232; p. 53.
Carpenter, George D., assignor, by mesne assignments, to The White Motor Company, Cleveland, Ohio. Delivery-truck. No. 1,203,977; Nov. 7; Gaz. vol. 232; p. 149.
Carr, Edward G., Oceanside, Cal. Concrete-tamper. No. 1,204,245; Nov. 7; Gaz. vol. 232; p. 242.
Carter, Charles D., New York, and G. F. Bibb, Troy, N. Y., assignors to The Floyd-Wells Company, Royersford, Pa. Combined coal and gas stove. No. 1,204,130; Nov. 7; Gaz. vol. 232; p. 203.
Carter, Russell S., Hewlett, N. Y. Shock-absorber connection. No. 1,203,580; Nov. 7; Gaz. vol. 232; p. 9.
Carter, Walter C., Pittsburgh, Pa. Game-board. No. 1,204,246; Nov. 7; Gaz. vol. 232; p. 242.
Cartwright, Albert D., and A. Baer, Toledo, Ohio. Horse-shoe-calking machine. No. 1,203,978; Nov. 7; Gaz. vol. 232; p. 149.
Cashel, Andrew J., assignor of one-third to W. Cashel and one-third to W. Snare, Casper, Wyo. Level. No. 1,203,702; Nov. 7; Gaz. vol. 232; p. 53.
Cashel, William, *et al.* (See Cashel, Andrew J., assignor.)
Casler, Herman, Canastota, N. Y. Boring-tool. No. 1,204,339; Nov. 7; Gaz. vol. 232; p. 273.
Cassidy, William W., Deadwood, S. D. Condenser. No. 1,203,581; Nov. 7; Gaz. vol. 232; p. 10.
Cavanagh, John F. (See Wilcox and Cavanagh.)
Cecil, Wilson J., *et al.* (See Johnson, Wallace C., assignor.)
Celluloid Company, The. (See Lindsay, William G., assignor.)
Chapman, Samuel D., Kansas City, Mo. Spring-wheel. No. 1,204,340; Nov. 7; Gaz. vol. 232; p. 274.
Charles L. Seabury & Co., *et al.* (See Millbourn, James, assignor.)
Chase, Charles A., Chicago, Ill. Electric sign. No. 1,203,582; Nov. 7; Gaz. vol. 232; p. 10.
Chevalier, La Rue B., Iola, Kans. Pulverized-coal-feeding apparatus. No. 1,203,703; Nov. 7; Gaz. vol. 232; p. 54.
Chisholm, Charles L., Marysville, New Brunswick, Canada, assignor of one-fourth to E. G. Siggers, Washington, D. C. Phonograph attachment. No. 1,204,341; Nov. 7; Gaz. vol. 232; p. 274.
Chrisman, Horace, Edgewood, Pa., assignor to Pittsburgh Meter Company. Gearing. No. 1,204,251; Nov. 7; Gaz. vol. 232; p. 244.
Christenson, Albert C., Bushnell, Nebr. Sash-lock. No. 1,203,850; Nov. 7; Gaz. vol. 232; p. 105.
Christie, Elizabeth. (See Ortengren, Alfred, assignor.)
Christopher, Ernest W. (See Caron, Octave, assignor.)
Clark, Charles C., New York, N. Y. Weighing device. No. 1,203,583; Nov. 7; Gaz. vol. 232; p. 10.
Clark, Charles M., and R. W. Andrews, Chicago, Ill., assignors, by mesne assignments, to Erie Pump & Equipment Company, Erie, Pa. Boiler-alarm. No. 1,203,979; Nov. 7; Gaz. vol. 232; p. 149.
Clark, Edgar H., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. System for controlling electrical circuits. No. 1,203,851; Nov. 7; Gaz. vol. 232; p. 106.
Clark, Norris E., Plainville, Conn. Expanded-metal fabric. No. 1,203,704; Nov. 7; Gaz. vol. 232; p. 54.
Clarke, Matthew, Wilkes-Barre, Pa. Saw-holder. No. 1,203,980; Nov. 7; Gaz. vol. 232; p. 150.
Claudel, Charles H., Levallois-Perret, France. Carbureter. No. 1,204,247; Nov. 7; Gaz. vol. 232; p. 243.
Clemens, John G., Buffalo, N. Y. Soldering apparatus. No. 1,204,131; Nov. 7; Gaz. vol. 232; p. 203.
Clemens, John G., Buffalo, N. Y. Toy. No. 1,204,132; Nov. 7; Gaz. vol. 232; p. 203.
Clifford, James S., Weehawken, N. J. Table-lamp attachment. No. 1,203,981; Nov. 7; Gaz. vol. 232; p. 150.
Clorius, Axel V., Frederiksberg, and O. T. Clorius, Hellerup, near Copenhagen, Denmark, assignors to Kentucky Derby Company, Inc., New York, N. Y. Game of skill. No. 1,203,852; Nov. 7; Gaz. vol. 232; p. 106.
Clorius, Oden T. (See Clorius, Axel V. and O. T.)
Cobb, Henry Z., Winchester, Mass., assignor to Revere Rubber Company. Machine for wrapping hose and similar articles. No. 1,204,342; Nov. 7; Gaz. vol. 232; p. 274.
Codrington, William F., New York, N. Y. Method of and apparatus for producing rolls of adhesive material. No. 1,204,248; Nov. 7; Gaz. vol. 232; p. 243.
Cole, Robert C., assignor to The Johns-Pratt Company, Hartford, Conn. Cut-out block. No. 1,203,584; Nov. 7; Gaz. vol. 232; p. 11.
Coll, Aloysius, Clarksburg, W. Va. Washboard-clamp. No. 1,204,133; Nov. 7; Gaz. vol. 232; p. 204.
Collette, Austin B., Everett, Mass., assignor to American Steam Gauge & Valve Manufacturing Co. Forming springs for pressure or the like gages. No. 1,203,982; Nov. 7; Gaz. vol. 232; p. 151.
Commercial Camera Company. (See Greene, John S., assignor.)
Comstock, Corry B., New York, N. Y., assignor to Ward Bread Company. Dough-trough. No. 1,203,705; Nov. 7; Gaz. vol. 232; p. 55.
Condon, Edward T., Jr., Morristown, N. J. Collapsible baby-walker. No. 1,204,249; Nov. 7; Gaz. vol. 232; p. 244.
Cone, Benjamin F., Ashland, Nebr. Guard for vehicles. No. 1,203,706; Nov. 7; Gaz. vol. 232; p. 55.
Connecticut Telephone & Electric Company, The. (See Wilcox and Cavanagh, assignors.)
Connolly, Frank A., Pompton Lakes, N. J. Mixing-machine. No. 1,204,343; Nov. 7; Gaz. vol. 232; p. 275.
Connolly, William L., New York, N. Y. Candelabrum. No. 1,204,134; Nov. 7; Gaz. vol. 232; p. 204.
Contal, Camille, St. Cloud, France, assignor, by mesne assignments, to Albert T. Otto & Sons, New York, N. Y. Extensible tool. No. 1,203,853; Nov. 7; Gaz. vol. 232; p. 107.
Contant, George C., New York, N. Y., assignor of one-half to J. Decker, Jr., Montclair, N. J. Powdered egg product and making the same. No. 1,203,983; Nov. 7; Gaz. vol. 232; p. 151.
Continental Rubber Works. (See Vey, John A., assignor.)
Conwell, Walter L. (See Wampler and Conwell.)
Cook, George W., Menomonie, Wis. Changeable exhibitor. No. 1,204,135; Nov. 7; Gaz. vol. 232; p. 204.
Cooper, Charles J., assignor of one-half to H. W. Cooper Saddlery Hardware Mfg. Company, Moline, Ill. Trace. No. 1,203,854; Nov. 7; Gaz. vol. 232; p. 107.
Cooper Hewitt Electric Company. (See Bastian and Salisbury, assignors.)
Cooper-Hewitt Electric Company. (See Thomas, Percy H., assignor.)
Cooper, John J., London, England, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine copy-holder. No. 1,203,585; Nov. 7; Gaz. vol. 232; p. 11.
Cooper Manufacturing Company. (See Burke, William W., assignor.)
Cooper, William H., East St. Louis, Ill. Nose-bag for horses. No. 1,204,250; Nov. 7; Gaz. vol. 232; p. 244.
Corcoran-Victor Company, The. (See Kuen, Eugene A., assignor.)
Corey, Lyle D., Minneapolis, Minn. Fan attachment for sewing-machines. No. 1,203,984; Nov. 7; Gaz. vol. 232; p. 152.
Cowles, Samuel E., Woronoco, Mass. Lifting device. No. 1,203,586; Nov. 7; Gaz. vol. 232; p. 11.
Creveling, John L., New York, N. Y. Telephone appliance. No. 1,204,136; Nov. 7; Gaz. vol. 232; p. 205.
Cring, George V., Portland, Ind. Inside wind-shield for vehicles. No. 1,203,587; Nov. 7; Gaz. vol. 232; p. 12.
Cronk, Harrison T., assignor to Cronk-Salter Company, New York, N. Y. Refuse-tank. No. 1,203,707; Nov. 7; Gaz. vol. 232; p. 55.
Cronk-Salter Company. (See Cronk, Harrison T., assignor.)
Cruikshank, James W., Pittsburg, Pa. Pot-filling apparatus. No. 1,204,252; Nov. 7; Gaz. vol. 232; p. 245.
Culp, Samuel T., Littleton, Colo. Tire-armor. No. 1,203,985; Nov. 7; Gaz. vol. 232; p. 152.
Curnow, Joseph S., Newark, N. J. Window-lock. No. 1,203,986; Nov. 7; Gaz. vol. 232; p. 152.
Currie, Jasper J., assignor to G. P. Kearney, Detroit, Mich. Paper-roll holder. No. 1,203,588; Nov. 7; Gaz. vol. 232; p. 12.
Curtenius, Dwight R., assignor to Kalamazoo Stove Company, Kalamazoo, Mich. Kitchen-cabinet. No. 1,203,589; Nov. 7; Gaz. vol. 232; p. 13.
Curtiss Aeroplane & Motor Corporation. (See Curtiss, Glenn H., assignor.)
Curtiss, Glenn H., Hammondsport, N. Y., assignor to Curtiss Aeroplane & Motor Corporation. Flying-machine. No. 1,204,380; Nov. 7; Gaz. vol. 232; p. 287.
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Tatum, Lewis L., assignor.)
D'Ardenne, Walter H., Philadelphia, Pa. Internal-combustion engine. No. 1,203,855; Nov. 7; Gaz. vol. 232; p. 107.

Dalton, John J., Seattle, Wash. Receptacle for pot-lids. No. 1,204,344; Nov. 7; Gaz. vol. 232; p. 275.
Dalton, William, Schenectady, N. Y. Manufacture of blended powder compounds. No. 1,204,137; Nov. 7; Gaz. vol. 232; p. 205.
Daugherty, Matthew L. (See Gilbert and Daugherty.)
Davey, Daniel, Maribyrnong, and H. Maison, Flemington, Victoria, Australia. Sawing-machine for halving carcasses. No. 1,204,345; Nov. 7; Gaz. vol. 232; p. 275.
Davies, Francis, Philadelphia, Pa. Milling and routing machine. No. 1,203,708; Nov. 7; Gaz. vol. 232; p. 56.
Davis, John H. (See Renner, William, assignor.)
Davis, Linford J., assignor to Keyes-Davis Company, Inc., Battle Creek, Mich. Receptacle-cover. No. 1,203,987; Nov. 7; Gaz. vol. 232; p. 152.
Day, Isaac O., Ottumwa, Iowa. Medicated poultry-band. No. 1,203,590; Nov. 7; Gaz. vol. 232; p. 13.
De Canio, Victor A., Union Hill, N. J., assignor to Lorillard Refrigerator Co., New York, N. Y. Refrigerator. No. 1,204,347; Nov. 7; Gaz. vol. 232; p. 276.
De Cew, Judson A., Montreal, Quebec, Canada. Making an adhesive from waste sulfite liquor. No. 1,203,856; Nov. 7; Gaz. vol. 232; p. 108.
De Cew, Judson A., Montreal, Quebec, Canada. Rosin sizing composition. No. 1,203,857; Nov. 7; Gaz. vol. 232; p. 108.
De Escobales, Hilario, New York, N. Y. Wrapping-machine. No. 1,203,592; Nov. 7; Gaz. vol. 232; p. 14.
Dearborn, Samuel S., Boston, Mass. Rotary spinning-ring. No. 1,204,346; Nov. 7; Gaz. vol. 232; p. 276.
Decker, Josiah, Jr. (See Contant, George C., assignor.)
Degener, Gustave O., and E. Saunders, assignors to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,203,988; Nov. 7; Gaz. vol. 232; p. 153.
Dehn, George J., Chicago, Ill. Pipe-fitting. No. 1,203,989; Nov. 7; Gaz. vol. 232; p. 154.
Dennis, Samuel K., Chicago, Ill., assignor by mesne assignments to International Harvester Corporation. Clutch mechanism for corn-planters. No. 1,203,591; Nov. 7; Gaz. vol. 232; p. 13.
Dental, Florence J., *et al.* (See Gilliam, Hugh C., assignor.)
Dental Manufacturing Co. (See Betts, Charles F., assignor.)
Detroit Can Company. (See Ford, Ben K., assignor.)
Detroit Can Company. (See Harbeck, Jervis R., assignor.)
Dewey, Haywood G., Westminster, and O. D. Green, Baltimore, Md. Shade-carrier. No. 1,203,593; Nov. 7; Gaz. vol. 232; p. 14.
Diamond Match Company, The. (See Friede, Samuel M., assignor.)
Diamond Match Company. (See Paridon, Michael, assignor.)
Diamond Match Company. (See Shafer, Frank, assignor.)
Dickerson, Eustice E., Fort Worth, Tex. Apparatus for cleaning cotton. No. 1,203,709; Nov. 7; Gaz. vol. 232; p. 56.
Dickerson, Eustice E., Fort Worth, Tex. Cotton-cleaner. No. 1,203,710; Nov. 7; Gaz. vol. 232; p. 56.
Diercks, Henry F., Algonquin, Ill. Recoil shock-absorber. No. 1,204,253; Nov. 7; Gaz. vol. 232; p. 245.
Dieringer, John, Tacoma, Wash. Shock-absorber. No. 1,203,711; Nov. 7; Gaz. vol 232; p. 57.
Dietsche, Oscar A., Gladstone, N. D. Calculating attachment for type-writers. No. 1,203,858; Nov. 7; Gaz. vol. 232; p. 108.
Dietz, William H., Chicago, Ill. Bulletin-board. No. 1,203,712; Nov. 7; Gaz. vol. 232; p. 57.
Dilday, Simeon, Marissa, Ill. Sweet-potato digger. No. 1,203,713; Nov. 7; Gaz. vol. 232; p. 57.
Disser, Louis J., Ferguson, Mo. Advertising-dart. No. 1,203,714; Nov. 7; Gaz. vol. 232; p. 57.
Dodds, Ethan I., Central Valley, N. Y., assignor to Kerner Manufacturing Company, Pittsburgh, Pa. Resilient bolt. No. 1,204,254; Nov. 7; Gaz. vol. 232; p. 245.
Dodds, Ethan I., Central Valley, N. Y., assignor to Kerner Manufacturing Company, Pittsburgh, Pa. Manufacturing bolts. No. 1,204,255; Nov. 7; Gaz. vol. 232; p. 245.
Doherty, Harry B., assignor of one-half to J. M. McClellon, Everett, Mass. Coal-loading apparatus. No. 1,204,348; Nov. 7; Gaz. vol. 232; p. 276.
Domestic Appliances Company. (See Stabel, Joseph M., assignor.)
Doughty, George E., New York, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada. Manifolding sales-book. No. 1,204,384; Nov. 7; Gaz. vol. 232; p. 289.
Doust, James C., assignor of three-fourths to J. H. Lumbers, Toronto, Ontario, Canada. Rope-grip. No. 1,203,715; Nov. 7; Gaz. vol. 232; p. 57.
Dövle, Carl O. A., Notodden, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Electric-arc furnace. No. 1,204,349; Nov. 7; Gaz. vol. 232; p. 277.
Doyle, Francis A. (See Schwarz, Albert, assignor.)
Draper Company. (See Stimpson, Edward S., assignor.)
Draper Company. (See Widdup, William R., assignor.)
Draper, George H., *et al.* (See Moore, David P., assignor.)
Dreux, Alexander H., Buffalo, N. Y., assignor to F. N. Burt Company, Limited, Toronto, Ontario, Canada. Box. No. 1,203,990; Nov. 7; Gaz. vol. 232; p. 154.
Dubert, William F., Fulton, Iowa. Steering-gear. No. 1,204,138; Nov. 7; Gaz. vol. 232; p. 205.
Duecker, William, Memphis, Tenn. Belt. No. 1,203,859; Nov. 7; Gaz. vol. 232; p. 109.
Dugger, Edward E. (See Dugger, Joseph R., J. L., and E. E.)
Dugger, Joseph L. (See Dugger, Joseph R., J. L., and E. E.)
Dugger, Joseph R., J. L., and E. E., Norman, Okla. Folding car-step. No. 1,204,256; Nov. 7; Gaz. vol. 232; p. 246.
Dunbar, Harris T., Buffalo, N. Y. Drilling-machine. No. 1,203,860; Nov. 7; Gaz. vol. 232; p. 109.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Curved printing-plate. No. 1,203,716; Nov. 7; Gaz. vol. 232; p. 58.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Printing-machine. No. 1,203,717; Nov. 7; Gaz. vol. 232; p. 58.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Printing-form section. No. 1,203,718; Nov. 7; Gaz. vol. 232; p. 58.
Durant, George A., Swanson, Saskatchewan, Canada. Grain-shocker. No. 1,204,139; Nov. 7; Gaz. vol. 232; p. 206.
Dwyer, John T., St. Louis, Mo. Alloy. No. 1,203,991; Nov. 7; Gaz. vol. 232; p. 154.
E. & B. Holmes Machinery Company. (See Beugler, Edwin F., assignor.)
Earnshaw, Henry P. J., Boston, Mass., assignor to Earnshaw Manufacturing Company, Incorporated, Hartford, Conn. Truck. No. 1,203,861; Nov. 7; Gaz. vol. 232; p. 109.
Earnshaw Manufacturing Company. (See Earnshaw, Henry P. J., assignor.)
Eastham, J. Mally, *et al.* (See Bradley, Richard C., assignor.)
Eastman Kodak Company. (See Gaisman, Henry J., assignor.)
Eberhard, George F., Trenton, N. J., assignor to Robt. H. Ingersoll & Bro. Making watch backs and bezels. No. 1,204,257; Nov. 7; Gaz. vol. 232; p. 246.
Eberley, George W., Whitesboro, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Cutting and arranging material for collarets. No. 1,203,862; Nov. 7; Gaz. vol. 232; p. 110.
Eberley, George W., Whitesboro, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine and folding attachment therefor. No. 1,204,258; Nov. 7; Gaz. vol. 232; p. 246.
Economic Machinery Company. (See Woodland, Frank O., assignor.)
Edmunds, John, Waltham, Mass. Cloth stretcher and straightener. No. 1,203,719; Nov. 7; Gaz. vol. 232; p. 58.
Edwards, Henry E. (See Buch, Max, assignor.)
Egger, Ignaz, and C. Gartenmann, Gossau, Switzerland. Process and means for the manufacture of waterproof and expansive roofing and flooring. No. 1,204,259; Nov. 7; Gaz. vol. 232; p. 247.
Ekama, Gerrit. (See Hay and Ekama.)
Elder, David G., Chickamauga, Ga. Composition for treating rubber tires, &c. No. 1,203,720; Nov. 7; Gaz. vol. 232; p. 59.
Eldredge, Harold A., Newburyport, Mass. Window-screen. No. 1,204,140; Nov. 7; Gaz. vol. 232; p. 206.
Elkin, Warren P., Winchester, Ky. Hemp-breaking machine. No. 1,204,260; Nov. 7; Gaz. vol. 232; p. 247.
Ellcon Company, The. (See Wampler and Conwell, assignors.)
Ellerman, Jan. (See Van Calcar, Ellerman, and Martijn.)
Ellis, Carleton, Montclair, N. J. Color concentrate for edible fats. No. 1,203,594; Nov. 7; Gaz. vol. 232; p. 15.
Ellis, Carleton, Montclair, N. J., assignor to Ellis-Foster Company. Process of making sulfuric anhydrid and catalyzer therefor. No. 1,204,141; Nov. 7; Gaz. vol. 232; p. 206.
Ellis, Carleton, Montclair, N. J., assignor to Ellis-Foster Company. Making sulfuric anhydrid. No. 1,204,142; Nov. 7; Gaz. vol. 232; p. 207.
Ellis, Carleton, Montclair, and H. M. Weber, East Orange, N. J., assignors to Ellis-Foster Company. Contact material. No. 1,204,143; Nov. 7; Gaz. vol. 232; p. 207.
Ellis-Foster Company. (See Ellis, Carleton, assignor.)
Ellis-Foster Company. (See Ellis and Weber, assignors.)
Ellis, Halcolm, East Orange, N. J. Mechanical calculator. No. 1,203,863; Nov. 7; Gaz. vol. 232; p. 110.
Ellis, James W., Bassett, Nebr. Safety appliance. No. 1,204,144; Nov. 7; Gaz. vol. 232; p. 207.
Engebretson, Christian M., Starbuck, Minn. Combined music stand and case. No. 1,203,864; Nov. 7; Gaz. vol. 232; p. 110.
Ennis, Philip W., Factoryville, Pa. Transmission mechanism. No. 1,203,992; Nov. 7; Gaz. vol. 232; p. 154.
Enslin, Herbert E., Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Edge-finishing machine. No. 1,203,993; Nov. 7; Gaz. vol. 232; p. 155.
Erfurth, Ottomar O., Teuchern, Germany. Clay-purifier. No. 1,204,261; Nov. 7; Gaz. vol. 232; p. 247.
Erie Pump & Equipment Company. (See Clark and Andrews, assignors.)
Evans Stamping & Plating Company. (See Tuttle, Henry A., assignor.)

Evensen, Christian, Choteau, Mont. Door-catch. No. 1,203,595; Nov. 7; Gaz. vol. 232; p. 15.
Evers, Cyrus, and F. Carlsson, assignors to Lidgerwood Manufacturing Company, New York, N. Y. Clutch-operating means. No. 1,203,994; Nov. 7; Gaz. vol. 232; p. 155.
Eviston, John W., Milwaukee, Wis., assignor to The United States Graphite Company, Saginaw, Mich. Lubricator. No. 1,204,145; Nov. 7; Gaz. vol. 232; p. 207.
F. N. Burt Company. (See Dreux, Alexander H., assignor.)
Fair, Andrew A., Sioux City, Iowa. Poultry-feeder. No. 1,203,865; Nov. 7; Gaz. vol. 232; p. 111.
Fargo, Frank M., Chicago, Ill., and G. L. Thom, Brooklyn, N. Y., said Thom assignor to said Fargo. Alarm. No. 1,203,995; Nov. 7; Gaz. vol. 232; p. 156.
Fazakerley, Joseph E., Pittsfield, Mass. Hospital-bed. No. 1,203,721; Nov. 7; Gaz. vol. 232; p. 59.
Federal Steel Fixture Company. (See Magee, Chauncey L. C., assignor.)
Fehrenschild, Henry H., Rivervale, N. J. Temperature-control device. No. 1,204,262; Nov. 7; Gaz. vol. 232; p. 247.
Fend, Roland S., assignor to Woods Motor Vehicle Company, Chicago, Ill. Automobile. No. 1,204,146; Nov. 7; Gaz. vol. 232; p. 207.
Feninger, Edward J., and J. O'Neal, Spokane, Wash. Delivery apparatus. No. 1,203,596; Nov. 7; Gaz. vol. 232; p. 15.
Fenkart, Karl. (See Scheffknecht, Isidor, assignor.)
Fenton, John A., Oakland, Cal. Grass floor-covering. No. 1,203,597; Nov. 7; Gaz. vol. 232; p. 16.
Ferguson, James W., Jacobs Creek, Pa. Tool. No. 1,204,147; Nov. 7; Gaz. vol. 232; p. 208.
Fielding, George T., assignor of one-half to W. T. Hornaday, New York, N. Y. Sectional rim. No. 1,203,996; Nov. 7; Gaz. vol. 232; p. 156.
Fioretta, John B., New York, N. Y. Animal-trap. No. 1,203,997; Nov. 7; Gaz. vol. 232; p. 156.
Flanagan, William, Leland, Miss. Flue or tube cutter. No. 1,204,148; Nov. 7; Gaz. vol. 232; p. 208.
Fletcher, Thomas N., Hamilton, New Zealand. Releaser installation of milking-machines. No. 1,203,998; Nov. 7; Gaz. vol. 232; p. 156.
Flory, Andrew A., Grand Rapids, Mich., assignor to Grand Rapids Dimmer Company. Auto-light dimmer. No. 1,204,350; Nov. 7; Gaz. vol. 232; p. 277.
Flory, John H., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Electric locomotive. No. 1,203,999; Nov. 7; Gaz. vol. 232; p. 157.
Floyd-Wells Company, The. (See Carter and Bibb, assignors.)
Ford, Ben K., assignor to Detroit Can Company, Detroit, Mich. Container. No. 1,203,866; Nov. 7; Gaz. vol. 232; p. 111.
Ford, Silas M., St. Paul, Minn. Roofing-strip. No. 1,203,598; Nov. 7; Gaz. vol. 232; p. 16.
Frail, Alfred L., Wellsville, Ohio. Train-check holder. No. 1,203,599; Nov. 7; Gaz. vol. 232; p. 16.
Frank, William. (See Gonsior, Frank, and Schneider.)
Franke, Emil, Long Island City, N. Y. Pedal attachment. No. 1,204,000; Nov. 7; Gaz. vol. 232; p. 157.
Franks, Frederick B., Bath, Pa. Pulverizer. No. 1,204,385; Nov. 7; Gaz. vol. 232; p. 289.
Fratt, Harry C., Norristown, Pa. Cabinet. No. 1,204,263; Nov. 7; Gaz. vol. 232; p. 248.
Freas, Samuel T., Trenton, N. J., assignor to Henry Disston & Sons, Incorporated, Philadelphia, Pa. Crosscut-saw tool. No. 1,204,264; Nov. 7; Gaz. vol. 232; p. 248.
Fred Myers Mfg. Co. (See Myers, Frederick, assignor.)
Frederick, John S. (See Laudenschlager and Frederick.)
Freeman, Harry G., assignor of one-half to W. H. Bartlett, Atlantic City, N. J. Valve. No. 1,204,265; Nov. 7; Gaz. vol. 232; p. 249.
French, Niles O., Dexter, Iowa. Cherry-pitting device. No. 1,203,600; Nov. 7; Gaz. vol. 232; p. 16.
Fried. Krupp Aktiengesellschaft. (See Luyken, Wilhelm, assignor.)
Friedberger-Aaron Manufacturing Company. (See Aaron, Max N., assignor.)
Friede, Samuel M., New York, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Match-holder. No. 1,203,867; Nov. 7; Gaz. vol. 232; p. 111.
Fripp, Harold C., Walterboro, S. C. Attachment for connecting the frame and axle of an automobile. No. 1,204,001; Nov. 7; Gaz. vol. 232; p. 157.
Fulk, George L., assignor to The Postal Supply and Manufacturing Company, Cleveland, Ohio. Folding-machine. No. 1,203,722; Nov. 7; Gaz. vol. 232; p. 60.
Fuller, Charles, Gilbert, assignor of one-fourth to L. B. McFrederick, Mesa, and one-fourth to L. M. Nowell, Gilbert, Ariz. Machine for drawing sharp edges on metallic bodies. No. 1,203,723; Nov. 7; Gaz. vol. 232; p. 60.
Fulton Company, The. (See Fulton, Weston M., assignor.)
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Carbureter. No. 1,203,601; Nov. 7; Gaz. vol. 232; p. 17.
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Flush-tank. No. 1,203,602; Nov. 7; Gaz. vol. 232; p. 17.
Gabell, Albert F., assignor to I. X. L. Pump and Manufacturing Company, Philadelphia, Pa. Valve construction for water-closet apparatus. No. 1,203,724; Nov. 7; Gaz. vol. 232; p. 60.
Gaisman, Henry J., New York, assignor to Eastman Kodak Company, Rochester, N. Y. Photographic apparatus. No. 1,203,603; Nov. 7; Gaz. vol. 232; p. 18.
Gamewell Fire Alarm Telegraph Company. (See Suren, Nathan H., assignor.)
Gamewell Fire Alarm Telegraph Company, The. (See Voorhees, Lee J., assignor.)
Gano, Armstrong R., Thayer, Kans. Wheelbarrow-saw. No. 1,203,725; Nov. 7; Gaz. vol. 232; p. 61.
Garford Manufacturing Company, The. (See Manson, Ray H., assignor.)
Garrison, Leroy, Chester, Pa. Gas-range top. No. 1,204,266; Nov. 7; Gaz. vol. 232; p. 249.
Garrison, William M., Hebron, Me. Pocket sputum-cup. No. 1,203,604; Nov. 7; Gaz. vol. 232; p. 18.
Gartenmann, Carl. (See Egger and Gartenmann.)
Gas Engine & Power Co. *et al.* (See Millbourn, James, assignor.)
Gaylord, Edwin P., Rochester, N. Y. Hose-reel. No. 1,203,605; Nov. 7; Gaz. vol. 232; p. 18.
George, Henry, Brooklyn, N. Y. Window-lock. No. 1,203,606; Nov. 7; Gaz. vol. 232; p. 18.
Gelertsen, Otto E., Westfield, N. J., assignor to Greenfield Paper Bottle Company, New York, N. Y. Waterproofing composition. No. 1,204,149; Nov. 7; Gaz. vol. 232; p. 209.
General Reduction Company. (See Bergh, Loebinger, and Neuberger, assignors.)
German, Joseph T., assignor of one-fourth to J. P. Hopper, Sloan, Iowa. Headlight-steering mechanism. No. 1,204,002; Nov. 7; Gaz. vol. 232; p. 158.
Gessner, David, Worcester, Mass. Planetary cloth-napping machine. No. 1,204,150; Nov. 7; Gaz. vol. 232; p. 209.
Giba, Piotr, Chicago, Ill. Vehicle-brake. No. 1,204,267; Nov. 7; Gaz. vol. 232; p. 249.
Gilbert, George A., and M. L. Daugherty, Norwood, Ohio. Treating coated material. No. 1,204,151; Nov. 7; Gaz. vol. 232; p. 209.
Gillen, Mark P., San Diego, Cal. Vehicle-spring. No. 1,204,003; Nov. 7; Gaz. vol. 232; p. 158.
Gilliam, Hugh C., assignor of one-third to F. H. Preble and one-third to F. J. Dental, Philadelphia, Pa. Auxiliary air-supply device for internal-combustion engines. No. 1,204,004; Nov. 7; Gaz. vol. 232; p. 158.
Gilmer, John T., assignor of one-half to S. E. Airesman, Fulton, Ala. Dirigible headlight. No. 1,204,351; Nov. 7; Gaz. vol. 232; p. 278.
Gladding, Jesse G., Providence, R. I. Hose-nozzle. No. 1,203,607; Nov. 7; Gaz. vol. 232; p. 19.
Gleason, James E., A. L. Stewart, and E. W. Bullock, assignors to Gleason Works, Rochester, N. Y. Gear-cutting machine. No. 1,203,608; Nov. 7; Gaz. vol. 232; p. 19.
Gleason Works. (See Gleason, Stewart, and Bullock, assignors.)
Glotzbach, George J., Austin, Ill., assignor to American Can Company, New York, N. Y. Ornamenting metal. No. 1,204,005; Nov. 7; Gaz. vol. 232; p. 159.
Godfrey, Truman M. (See Kohman, Godfrey, and Ashe.)
Goldmerstein, Leon, New York, N. Y. Game. No. 1,204,006; Nov. 7; Gaz. vol. 232; p. 159.
Gonsior, Jozeph, W. Frank, and C. Schneider, Medina, N. D. Combined mail-box and milk-bottle holder. No. 1,204,268; Nov. 7; Gaz. vol. 232; p. 250.
Goodell, John H., Marseilles, Ill. Billiard-cue. No. 1,204,152; Nov. 7; Gaz. vol. 232; p. 209.
Goodsell, Byron W., Chicago, Ill. Packing for pump-rods. No. 1,204,007; Nov. 7; Gaz. vol. 232; p. 159.
Goodwin, Oscar J., Rainier, Wash. Cake-cutter. No. 1,204,009; Nov. 7; Gaz. vol. 232; p. 160.
Goodwin, William B., Columbus, Ohio. Vehicle-top. No. 1,204,008; Nov. 7; Gaz. vol. 232; p. 159.
Goodyear's Metallic Rubber Shoe Co., The. (See Lee, Clifford, assignor.)
Gordon, William, Duxbury, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Last. No. 1,203,609; Nov. 7; Gaz. vol. 232; p. 20.
Gore, James H., Washington, D. C. Supporting and exhibiting apparatus. No. 1,204,010; Nov. 7; Gaz. vol. 232; p. 160.
Gould Storage Battery Company. (See Hubbard, Albert S., assignor.)
Gould Storage Battery Company. (See Jepson, John W., assignor.)
Grand Rapids Dimmer Company. (See Flory, Andrew A., assignor.)
Granger, Francis, Grunsburg, Pa. Sanitary screen. No. 1,203,868; Nov. 7; Gaz. vol. 232; p. 112.
Granz, Josef, Plauen, Germany. Embroidering-machine. No. 1,204,269; Nov. 7; Gaz. vol. 232; p. 250.
Green, Oscar D. (See Dewey and Green.)
Greene, Charles W., deceased, Pittsburgh, Pa.; H. Greene, administratrix. Ingot-mold. No. 1,204,270; Nov. 7; Gaz. vol. 232; p. 251.
Greene, Helen, administratrix. (See Greene, Charles W.)
Greene, John S., Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I. Photographic roll-holder. No. 1,204,011; Nov. 7; Gaz. vol. 232; p. 160.
Greene, Robert E., Memphis, Tenn. Delivery vehicle-body. No. 1,204,271; Nov. 7; Gaz. vol. 232; p. 251.
Greenfield Paper Bottle Company. (See Gelertsen, Otto E., assignor.)

Griffiths, William U., Philadelphia, Pa. Flush-tank-valve-actuating mechanism. No. 1,203,726; Nov. 7; Gaz. vol. 232; p. 61.
Groene, William F. (See Le Blond and Groene.)
Gruenfeldt, Emil, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Motor-vehicle. No. 1,203,727; Nov. 7; Gaz. vol. 232; p. 61.
Guett, Monroe, assignor to Hart & Hegeman Manufacturing Company, Hartford, Conn. Snap-switch. No. 1,204,012; Nov. 7; Gaz. vol. 232; p. 161.
Guiberson, Samuel A., Jr. (See Richard, Leroy L., assignor.)
Gyro Motor Company. (See Moore, Robert S., assignor.)
H. W. Cooper Saddlery Hardware Mfg. Company. (See Cooper, Charles J., assignor.)
Hachmann, Frederick, assignor of one-fourth to F. C. Schoenthaler, St. Louis, Mo. Hose-coupling. No. 1,204,352; Nov. 7; Gaz. vol. 232; p. 278.
Haggard, Dixie L., *et al.* (See Johnson, Wallace C., assignor.)
Haggard, Joe E., *et al.* (See Johnson, Wallace C., assignor.)
Haines, Harry V., Farrell, Pa. Wrench. No. 1,203,728; Nov. 7; Gaz. vol. 232; p. 61.
Hale, Barry E., Greenfield, Mass. Corn and callus remover. No. 1,203,869; Nov. 7; Gaz. vol. 232; p. 112.
Hale, William F., *et al.* (See Maxwell, George S., assignor.)
Hall, Arthur J., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system and apparatus. No. 1,203,610; Nov. 7; Gaz. vol. 232; p. 20.
Hallam, Samuel W., and A. T. Houldsworth, New York, N. Y. Combined hood and scarf. No. 1,203,870; Nov. 7; Gaz. vol. 232; p. 112.
Halsey, Edward S., Philadephia, Pa. Individual thermostatic controller for radiators. No. 1,204,386; Nov. 7; Gaz. vol. 232; p. 290.
Hammalian, Paul M. (See Smith, John J. C., assignor.)
Hammers, Morgan J., Detroit, Mich. Auxiliary seat for vehicles. No. 1,203,729; Nov. 7; Gaz. vol. 232; p. 62.
Hanna, William T., assignor, by mesne assignments, to The Mechanical Construction Company, Cincinnati, Ohio. Mechanical stoker. No. 1,203,871; Nov. 7; Gaz. vol. 232; p. 113.
Hanni, Ernest, San Francisco, Cal. Spark-plug pressure indicator. No. 1,204,013; Nov. 7; Gaz. vol. 232; p. 161.
Hapgood, Clarence H., assignor, by mesne assignments, to The Toledo Scale Company, Toledo, Ohio. Scale. No. 1,203,611; Nov. 7; Gaz. vol. 232; p. 20.
Harbeck, Jervis R., assignor, by mesne assignments, to Detroit Can Company, Detroit, Mich. Dredging-can. No. 1,203,872; Nov. 7; Gaz. vol. 232; p. 113.
Hardcastle, John H., Edenwold, Tenn. Milk-can. No. 1,203,730; Nov. 7; Gaz. vol. 232; p. 62.
Hardman, George H., assignor of one-half to F. S. Brundage, Fall River, Mass. Machine for manufacturing sanitary napkins. No. 1,204,153; Nov. 7; Gaz. vol. 232; p. 210.
Hardyman, Frank A., assignor to Automatic Gas Power Company, Quincy, Ill. Light-projecting apparatus. No. 1,204,272; Nov. 7; Gaz. vol. 232; p. 251.
Hargis, Thomas L., Woodburn, Ky. Wire-stretching means. No. 1,203,617; Nov. 7; Gaz. vol. 232; p. 23.
Haring, Garrett E. (See Mamel, William W., Sr., assignor.)
Harley-Davidson Motor Co. (See Harley, William S., assignor.)
Harley, William S., assignor to Harley-Davidson Motor Co., Milwaukee, Wis. Interchangeable wheel-hub. No. 1,203,612; Nov. 7; Gaz. vol. 232; p. 21.
Harris, John, Sheffield, England. Ore-roasting furnace. No. 1,203,613; Nov. 7; Gaz. vol. 232; p. 21.
Harris, John, Sheffield, England, and D. H. Thomas, Morriston, Wales. Evaporator. No. 1,203,614; Nov. 7; Gaz. vol. 232; p. 22.
Harris, John Sheffield, England, and D. H. Thomas, Morriston, Wales. Sulfuric-acid chamber. No. 1,203,615; Nov. 7; Gaz. vol. 232; p. 22.
Hart & Hegeman Manufacturing Company. (See Guett, Monroe, assignor.)
Hartfield, Helen A. (See Hartfield, Otto J., assignor.)
Hartfield, Otto J., Oakland, assignor to H. A. Hartfield, Los Angeles, Cal. Radiator. No. 1,203,731; Nov. 7; Gaz. vol. 232; p. 62.
Hartley, Wm. J. (See Tate, Robert L., assignor.)
Hartley Steel Crated Box Company, The. (See McLaughlin, Thomas, assignor.)
Hasselbring, August W., Barnum, Iowa. End-gate. No. 1,203,732; Nov. 7; Gaz. vol. 232; p. 62.
Hatch, Arthur G., and F. Waldorf, Duluth, Minn. Time-controlled apparatus. No. 1,203,873; Nov. 7; Gaz. vol. 232; p. 113.
Hawkins, Edgar M., assignor to M. D. Knowlton Company, Rochester, N. Y. Joint for corrugated paper-board. No. 1,203,616; Nov. 7; Gaz. vol. 232; p. 22.
Hawthorne, Ellsworth A., Bridgeport, Conn. Lamp. No. 1,203,618; Nov. 7; Gaz. vol. 232; p. 23.
Hay, Marley F., and G. Ekama, The Hague, Netherlands. Torpedo-tube for submarines or the like. No. 1,204,353; Nov. 7; Gaz. vol. 232; p. 278.
Heap, Robert S., Burnley, England. Beam-clamping device. No. 1,203,733; Nov. 7; Gaz. vol. 232; p. 63.
Hecht, Julius L., Evanston, assignor of one-half to E. O. Schweitzer, Chicago, Ill. Controlling device for automobiles. No. 1,204,014; Nov. 7; Gaz. vol. 232; p. 161.
Heidland, Ernest and H., St. Louis, Mo. Dough-punching machine. No. 1,203,734; Nov. 7; Gaz. vol. 232; p. 63.
Heidland, Herman. (See Heidland, Ernest and H.)
Henry Disston & Sons. (See Freas, Samuel T., assignor.)
Henwood, Horace E., New York, N. Y. Acetylene-gas generator and device for feeding carbids. No. 1,204,015; Nov. 7; Gaz. vol. 232; p. 162.
Henwood, Horace E., New York, N. Y. Acetylene-gas-generator-feeding mechanism. No. 1,204,016; Nov. 7; Gaz. vol. 232; p. 162.
Herron, William J., Wilkinsburg, Pa. Locking throttle-handle for pneumatic tools. No. 1,203,735; Nov. 7; Gaz. vol. 232; p. 63.
Hesse Envelope Company, The. (See Otey, George S., assignor.)
Hewitt, Herbert H., Buffalo, N. Y. Casting apparatus. No. 1,203,619; Nov. 7; Gaz. vol. 232; p. 23.
Hi-Lo Jack Company. (See Johnson, Alvin L., assignor.)
Hickman, Wilbur M., and I. Canniff, Battle Creek, Mich. Block-mold. No. 1,204,354; Nov. 7; Gaz. vol. 234; p. 279.
Hickman, William A., Boston, Mass. Motor-boat. No. 1,204,355; Nov. 7; Gaz. vol. 232; p. 279.
Hidden, Charles P., Brookline, assignor to The Lamson Company, Boston, Mass. Automatic despatching and selective delivery apparatus. No. 1,203,736; Nov. 7; Gaz. vol. 232; p. 64.
Hilfiker, Frederick O., Rochester, N. Y. Bath appliance. No. 1,203,874; Nov. 7; Gaz. vol. 232; p. 114.
Hilton, Roland C., Boston, Mass., assignor to West Side Foundry Company, Colonie, N. Y. Air-pump. No. 1,204,273; Nov. 7; Gaz. vol. 232; p. 251.
Hinkey, Frank A., New Haven, Conn. Tackling-dummy. No. 1,204,017; Nov. 7; Gaz. vol. 232; p. 163.
Hoar, Guy W., Bonesteel, S. D. Cultivator-disk mounting. No. 1,203,737; Nov. 7; Gaz. vol. 232; p. 65.
Hobby, Walter W. (See Bates and Hobby.)
Hodgman, Willis K., Taunton, Mass. Combined water-heating and sprinkler system. No. 1,203,738; Nov. 7; Gaz. vol. 232; p. 65.
Hodgson, John G., Maywood, Ill., assignor to American Can Company, New York, N. Y. Food-preserving container. No. 1,203,875; Nov. 7; Gaz. vol. 232; p. 114.
Hodo, Wesley A. J., Cleburne, Tex. Cotton ginning, cleaning, and bleaching mechanism. No. 1,203,739; Nov. 7; Gaz. vol. 232; p. 65.
Holland, Frank G., assignor to Mutual Specialty Manufacturing Company, Cleveland, Ohio. Combined coin and ticket holder. No. 1,204,018; Nov. 7; Gaz. vol. 232; p. 163.
Holt, Andrew J., Maryville, Mo. Unloading apparatus. No. 1,203,620; Nov. 7; Gaz. vol. 232; p. 24.
Holter, Alfred, Rjukan, assignor to Norsk Hydro-elektrisk Kvælstofaktieselskab, Christiania, Norway. Granulating nitrate of lime and similar substances without dephlegmation and dust. No. 1,203,740; Nov. 7; Gaz. vol. 232; p. 66.
Hope-Jones, Robert, assignor to Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Key mechanism for organs. No. 1,203,621; Nov. 7; Gaz. vol. 232; p. 24.
Hopkinson, Ernest, East Orange, N. J. Tire-carrying rim. No. 1,204,019; Nov. 7; Gaz. vol. 232; p. 163.
Hopper, John P. (See German, Joseph T., assignor.)
Hora, Edith, Wandsworth, England. Focal-plane shutter and roller-blind shutter. No. 1,204,154; Nov. 7; Gaz. vol. 232; p. 210.
Hori, Tatsuo, Inglewood, Cal. Automobile-signal. No. 1,204,020; Nov. 7; Gaz. vol. 232; p. 164.
Hornaday, William T. (See Fielding, George T., assignor.)
Hornor, Levi, Wichita, Kans. Back-stop brake for automobiles. No. 1,203,876; Nov. 7; Gaz. vol. 232; p. 114.
Horsey, Edgar T., Cleveland, Ohio. Portable vulcanizer. No. 1,204,021; Nov. 7; Gaz. vol. 232; p. 164.
Hough, J. Lewis. (See Thorne, Robert H., assignor.)
Houlden, Charles, Creek View, Victoria, Australia. Harvesting-machine. No. 1,204,356; Nov. 7; Gaz. vol. 232; p. 279.
Houldsworth, Ambrose T. (See Hallam and Houldsworth.)
Howard, John W., Valley Falls, R. I. Bag-filling machine. No. 1,204,274; Nov. 7; Gaz. vol. 232; p. 252.
Howie, James F., Seattle, Wash. Motor-driven car. No. 1,203,741; Nov. 7; Gaz. vol. 232; p. 66.
Hubbard, Albert S., Belleville, N. J., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 1,204,155; Nov. 7; Gaz. vol. 232; p. 210.
Hubbell, George M., Los Gatos, Cal. Water-distributing system. No. 1,204,156; Nov. 7; Gaz. vol. 232; p. 211.
Huettner, George, New York, N. Y. Lock-nut. No. 1,204,275; Nov. 7; Gaz. vol. 232; p. 252.
Huffman, Estil J., assignor to Sears, Roebuck and Company, Chicago, Ill. Folding standard for vehicles. No. 1,203,622; Nov. 7; Gaz. vol. 232; p. 24.
Hughes Electric Heating Company. (See Ruckle, Edward H., assignor.)
Hughes, Howard R., assignor to Hughes Tool Company, Houston, Tex. Rotary boring-drill. No. 1,204,022; Nov. 7; Gaz. vol. 232; p. 164.

Hughes, Howard R., assignor to Sharp-Hughes Tool Company, Houston, Tex. Disk drill. No. 1,204,157; Nov. 7; Gaz. vol. 232; p. 211.
Hughes Tool Company. (See Hughes, Howard R., assignor.)
Humphrey, Edward R., assignor to Safety First Air Brake Company (Canada) Limited, Victoria, B. C., Canada. Electromagnetic air-brake. No. 1,203,877; Nov. 7; Gaz. vol. 232; p. 115.
Hupp, Albert, Washington, D. C. Railway mail-exchange apparatus. No. 1,203,623; Nov. 7; Gaz. vol. 232; p. 25.
Huson, Winfield S., Derby, and C. R. Kaddeland, Shelton, assignors to The Whitlock Printing Press Mfg. Co., Derby, Conn. Delivery mechanism for printing-presses. No. 1,203,878; Nov. 7; Gaz. vol. 232; p. 115.
I. X. L. Pump and Manufacturing Company. (See Gabell, Albert F., assignor.)
Illinois Iron & Bolt Company. (See Rainbow, Frederick L., assignor.)
Ingle, Isaac B., Bloomington, Ill. Window-ventilator. No. 1,204,158; Nov. 7; Gaz. vol. 232; p. 211.
Ingold, Carl F., assignor to Milwaukee Optical Manufacturing Company, Milwaukee, Wis. Eyeglass-frame. No. 1,203,624; Nov. 7; Gaz. vol. 232; p. 25.
International Couplers Company. (See White, Walter C., assignor.)
International Harvester Corporation. (See Dennis, Samuel K., assignor.)
Ireland, C. Frank *et al.* (See Bradley, Richard C., assignor.)
Jacobus, David S., Jersey City, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Steam-boiler superheater. No. 1,203,625; Nov. 7; Gaz. vol. 232; p. 25.
Jaffe, Edward I. and E., New York, N. Y. Releasable self-fastening button. No. 1,204,159; Nov. 7; Gaz. vol. 232; p. 212.
Jaffe, Elias. (See Jaffe, Edward I. and E.)
Janzen, Franz, assignor of one-third to E. T. Malloy and one-third to G. J. Kalberer, Hamilton, Ohio. Caster. No. 1,203,879; Nov. 7; Gaz. vol. 232; p. 116.
Jefferson, Eugene D., Boston, Mass. Apparatus for treating fibrous materials. No. 1,204,357; Nov. 7; Gaz. vol. 232; p. 280.
Jeffrey Manufacturing Company, The. (See Flory, John H., assignor.)
Jepson, John W., Depew, N. Y., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 1,204,160; Nov. 7; Gaz. vol. 232; p. 213.
Johanson, Emil G., Chicago, Ill. Light-rays refractor. No. 1,204,023; Nov. 7; Gaz. vol. 232; p. 165.
John Hall & Sons (Bristol & London) Limited. (See Speight, Alfred, assignor.)
John W. Brown Manufacturing Company, The. (See Pfeifer, Leo L., assignor.)
Johns-Pratt Company, The. (See Cole, Robert C., assignor.)
Johnson, Alvin L., assignor, by mesne assignments, to Hi-Lo Jack Company, Worcester, Mass. Jack. No. 1,204,276; Nov. 7; Gaz. vol. 232; p. 253.
Johnson, Charles E., Muskegon, Mich. Piston-ring. No. 1,204,024; Nov. 7; Gaz. vol. 232; p. 165.
Johnson, Charles E., Muskegon, Mich. Chuck. No. 1,204,025; Nov. 7; Gaz. vol. 232; p. 165.
Johnson, Charles E., Muskegon, Mich. Ring-slot-testing device. No. 1,204,026; Nov. 7; Gaz. vol. 232; p. 166.
Johnson, Charles E., Muskegon, Mich. Rough-ring-testing appliance. No. 1,204,027; Nov. 7; Gaz. vol. 232; p. 166.
Johnson, Charles E., Muskegon, Mich. Machine for assembling piston-rings and pistons. No. 1,204,028; Nov. 7; Gaz. vol. 232; p. 167.
Johnson, Harold P., Concord, N. H. Picture-frame and door clamp. No. 1,203,626; Nov. 7; Gaz. vol. 232; p. 26.
Johnson, John R., Los Angeles, Cal. Carbureter. No. 1,204,029; Nov. 7; Gaz. vol. 232; p. 167.
Johnson, Lewis E. (See Carner, Leonard A., assignor.)
Johnson, Lewis H., Bloomfield, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,203,742; Nov. 7; Gaz. vol. 232; p. 67.
Johnson, Nels C., Racine, Wis. Garbage-disposal apparatus. No. 1,203,743; Nov. 7; Gaz. vol. 232; p. 67.
Johnson, Peter J., Shelley, Idaho. Shoe and glove eyelet. No. 1,203,627; Nov. 7; Gaz. vol. 232; p. 26.
Johnson, Wallace C., Nevada, assignor of one-fourth to D. L. Haggard, one-fourth to J. E. Haggard, Kansas City, and one-fourth to W. J. Cecil, Nevada, Mo. Slide-presenting machine. No. 1,203,744; Nov. 7; Gaz. vol. 232; p. 68.
Kaddeland, Christen R. (See Huson and Kaddeland.)
Kalamazoo Stove Company. (See Curtenius, Dwight R., assignor.)
Kalberer, George J., *et al.* (See Janzen, Franz, assignor.)
Kane, Meyer M., Chicago, Ill. Steam-pressing machine. No. 1,203,880; Nov. 7; Gaz. vol. 232; p. 116.
Kasprzyk, Leon, Kosciusko, Tex. Wire-stretcher. No. 1,204,277; Nov. 7; Gaz. vol. 232; p. 252.
Kearney, George F. (See Currie, Jasper J., assignor.)
Keller, Peter, Chicago, Ill. Tip for gas-burners. No. 1,204,278; Nov. 7; Gaz. vol. 232; p. 253.
Kelley, Arthur F., *et al.*, administrators. (See Woodland, Frank O.)
Kellner, Gustav A. H., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Lens centering and measuring instrument. No. 1,204,030; Nov. 7; Gaz. vol. 232; p. 168.
Kellogg, James L., New York, N. Y. Surprise and alarm device. No. 1,204,031; Nov. 7; Gaz. vol. 232; p. 168.
Kellogg, John L., assignor to Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Manufacture of beverage extracts. No. 1,204,032; Nov. 7; Gaz. vol. 232; p. 168.
Kellogg, John L., assignor to Kellogg Toasted Corn Flake Co., Battle Creek, Mich. Manufacture of beverage extracts. No. 1,204,033; Nov. 7; Gaz. vol. 232; p. 280.
Kellogg Switchboard and Supply Company. (See Winston, Charles S., assignor.)
Kellogg Toasted Corn Flake Company. (See Kellogg, John L., assignor.)
Kelly, John F., assignor to Thomas Maddock's Sons Company, Trenton, N. J. Lavatory. No. 1,204,033; Nov. 7; Gaz. vol. 232; p. 169.
Kelsey, Edgar A., Mount Vernon, N. Y. Water-gage for steam-boilers and similar apparatus. No. 1,204,034; Nov. 7; Gaz. vol. 232; p. 169.
Kelso, Charles L. (See Blunt and Kelso.)
Kemp, William W., and W. H. Van Horn, Baltimore, Md. Multiple blast-burner. No. 1,204,359; Nov. 7; Gaz. vol. 232; p. 280.
Kentucky Derby Company. (See Clorius, Axel V. and O. T., assignors.)
Kerlin, William L., assignor to E. R. Welles, New York, N. Y. Screw-thread-rolling machine. No. 1,204,035; Nov. 7; Gaz. vol. 232; p. 169.
Kerner Manufacturing Company. (See Dodds, Ethan I., assignor.)
Kerze, Peter, Ely, Minn. Metal tie. No. 1,204,279; Nov. 7; Gaz. vol. 232; p. 253.
Keyes-Davis Company. (See Davis, Linford J., assignor.)
Kiesel, William F., Jr., Altoona, Pa. Locomotive. No. 1,204,036; Nov. 7; Gaz. vol. 232; p. 170.
Kilgore, Frederick O., Somerville, Mass. Fluid transmission. No. 1,203,745; Nov. 7; Gaz. vol. 232; p. 68.
Killen, W. H., *et al.* (See Lord, Lewis P., assignor.)
Killinger, Joseph A., and A. W. Bean, Washington, D. C. Ammunition-hoist. No. 1,204,360; Nov. 7; Gaz. vol. 232; p. 280.
Kimmell, Herbert L., Los Angeles, Cal. Shock-absorber. No. 1,204,361; Nov. 7; Gaz. vol. 232; p. 281.
King, Clifford G., Providence, R. I. Brooch. No. 1,203,882; Nov. 7; Gaz. vol. 232; p. 117.
King, Frederick W., Cleveland, Ohio. Spectacles. No. 1,204,161; Nov. 7; Gaz. vol. 232; p. 213.
King, John G., Burlington, N. C. Ash-sifter. No. 1,203,881; Nov. 7; Gaz. vol. 232; p. 117.
Kinnebrew, Lee, *et al.* (See Bradley, Richard C., assignor.)
Kipniss, Abraham, New York, N. Y. Device for adjusting the jaws of revolving lathe-chucks. No. 1,203,628; Nov. 7; Gaz. vol. 232; p. 26.
Kirstaetter, Xavier, Basel, Switzerland. Lifting-jack. No. 1,204,162; Nov. 7; Gaz. vol. 232; p. 213.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,203,746; Nov. 7; Gaz. vol. 232; p. 69.
Klopsch, Paul J., Bayonne, N. J. Composition bowling-ball. No. 1,203,747; Nov. 7; Gaz. vol. 232; p. 69.
Knapp, Frederick H., Westminster, Md. Shade-carrier. No. 1,203,629; Nov. 7; Gaz. vol. 232; p. 27.
Knezik, Joseph, Madison, Ill. Safety locking mechanism for elevators. No. 1,204,362; Nov. 7; Gaz. vol. 232; p. 281.
Knobel, Abraham, San Diego, Cal. Egg-beater, cream-whip, and mixer. No. 1,204,363; Nov. 7; Gaz. vol. 232; p. 281.
Knox, Luther L., Avalon, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Flue and valve arrangement for reversing regenerator-furnaces. No. 1,203,748; Nov. 7; Gaz. vol. 232; p. 69.
Knox Pressed & Welded Steel Company. (See Knox, Luther L., assignor.)
Koenig, Harry A., Philadelphia, Pa. Coupling device for tubes. No. 1,203,630; Nov. 7; Gaz. vol. 232; p. 27.
Kohman, Henry A., T. M. Godfrey, and L. H. Ashe, Pittsburgh, Pa. Leavened bread. No. 1,204,281; Nov. 7; Gaz. vol. 232; p. 253.
Kohman, Henry A., T. M. Godfrey, and L. Ashe, Pittsburgh, Pa., assignors to Ward Baking Company, New York, N. Y. Manufacture of bread. No. 1,204,280; Nov. 7; Gaz. vol. 232; p. 253.
Kreid, Edward, Detroit, Mich. Life-saving device. No. 1,203,631; Nov. 7; Gaz. vol. 232; p. 27.
Kroes, Dirk. (See Callow and Kroes.)
Kromdyke, Will, Jr. (See Burtt, Frank, assignor.)
Kuen, Eugene A., assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio. Securing means for electric sockets. No. 1,204,381; Nov. 7; Gaz. vol. 232; p. 288.
Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,203,632; Nov. 7; Gaz. vol. 232; p. 28.
Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,203,633; Nov. 7; Gaz. vol. 232; p. 28.
Kusebauch, Anton K., Pittsburgh, Pa. Powder-blending machine. No. 1,204,163; Nov. 7; Gaz. vol. 232; p. 214.
Kuznor, Peter, New Castle, Pa. Automatic catch and carrying machine. No. 1,203,749; Nov. 7; Gaz. vol. 232; p. 70.
Laher, Frank J., Portland, Oreg. Laminated spring. No. 1,204,037; Nov. 7; Gaz. vol. 232; p. 170.

Lake, Robert H., U. S. Navy. Disk-throwing gun. No. 1,204,282; Nov. 7; Gaz. vol. 232; p. 254.
Lamothe, George. (See Lamothe, Ovide and G.)
Lamothe, Ovide and G., Montreal, Quebec, Canada. Sanitary toothpick-holder. No. 1,204,364; Nov. 7; Gaz. vol. 232; p. 282.
Lamson Company, The. (See Hidden, Charles P., assignor.)
Lancaster, Thomas M., Pasadena, Cal. Hammock and canopy therefor. No. 1,204,283; Nov. 7; Gaz. vol. 232; p. 254.
Landers, Frary & Clark. (See Carlson, Frederick E., assignor.)
Larson, Iver A., Gatzke, Minn. Wrench. No. 1,203,750; Nov. 7; Gaz. vol. 232; p. 70.
Laube, John. (See Task, Henry, assignor.)
Lauchin, George Y., assignor of one-third to E. H. Sensiba, Crystal Falls, Mich. Gas-engine starter. No. 1,204,164; Nov. 7; Gaz. vol. 232; p. 214.
Laudenschlager, Benjamin F., and J. S. Frederick, Emaus, Pa. Window-screen. No. 1,203,634; Nov. 7; Gaz. vol. 232; p. 28.
Lawrence, Arthur W., New York, N. Y. Adding-machine. No. 1,204,284; Nov. 7; Gaz. vol. 232; p. 254.
Layton, William, Sea Girt, N. J. Weather-strip. No. 1,204,285; Nov. 7; Gaz. vol. 232; p. 255.
Le Blond, Richard K., and W. F. Groene, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio. Gearing. No. 1,203,751; Nov. 7; Gaz. vol. 232; p. 70.
Le Claire, Eugene J., St. Paul, Minn. Supplemental table-top. No. 1,203,752; Nov. 7; Gaz. vol. 232; p. 71.
Lederer, Anton, Atzgersdorf, near Vienna, Austria-Hungary. Support for metallic glow-filaments. No. 1,203,635; Nov. 7; Gaz. vol. 232; p. 29.
Lee, Clifford, Naugatuck, Conn., assignor to The Goodyear's Metallic Rubber Shoe Co. Rubber boot. No. 1,204,365; Nov. 7; Gaz. vol. 232; p. 282.
Legg, Samuel F., Sylvia, W. Va. Tool. No. 1,204,165; Nov. 7; Gaz. vol. 232; p. 215.
Lengquist, Frederick, and J. P. Wiles, Joplin, Mo. Display-rack. No. 1,204,286; Nov. 7; Gaz. vol. 232; p. 255.
Leppert, Adolph, Brooklyn, N. Y. Wave and wind power generator. No. 1,204,366; Nov. 7; Gaz. vol. 232; p. 282.
Letin, Chris, San Francisco, Cal. Splitting-machine. No. 1,203,753; Nov. 7; Gaz. vol. 232; p. 71.
Levin, Isaac, Brooklyn, N. Y. Collapsible garment-form stand. No. 1,204,638; Nov. 7; Gaz. vol. 232; p. 170.
Levin, Samuel A., Chicago, Ill. Apparatus for making artificial tooth-crowns. No. 1,204,166; Nov. 7; Gaz. vol. 232; p. 215.
Lewis, George C., Cedar, Kans. Cultivator. No. 1,204,287; Nov. 7; Gaz. vol. 232; p. 255.
Lewis, George W., Grinnell, Iowa. Gearing device for washing-machines. No. 1,203,883; Nov. 7; Gaz. vol. 232; p. 117.
Lewis, Rollin C., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Collapsible tap or die. No. 1,203,884; Nov. 7; Gaz. vol. 232; p. 117.
Lidgerwood Manufacturing Company. (See Carlsson, Fritiof, assignor.)
Lidgerwood Manufacturing Company. (See Evers and Carlsson, assignors.)
Liefbroer, John, and J. Tendollen, Oostburg, Wis. Safety-valve for tire-pumps and the like. No. 1,203,754; Nov. 7; Gaz. vol. 232; p. 72.
Like, Wayne, Plainwell, Mich. Ice-cream-cone filler. No. 1,204,167; Nov. 7; Gaz. vol. 232; p. 215.
Lindeburg, Charles F., Newark, N. J. Glass-cutting machine. No. 1,204,039; Nov. 7; Gaz. vol. 232; p. 171.
Lindell, August and E. C., Rockford, Ill. Nut-lock. No. 1,203,755; Nov. 7; Gaz. vol. 232; p. 72.
Lindell, Elmer C. (See Lindell, August and E. C.)
Lindsay, William G., Caldwell, assignor to The Celluloid Company, New York, N. Y. Making acetyl-cellulose plastic compounds. No. 1,203,756; Nov. 7; Gaz. vol. 232; p. 72.
Lindsey, Eddie B., Buffalo, Ala. Wire-stretcher. No. 1,204,168; Nov. 7; Gaz. vol. 232; p. 216.
Linkletter, Robert, assignor of one-third to himself and two-thirds to G. W. Muttart, Jersey City, N. J. Base for concrete structures. No. 1,203,757; Nov. 7; Gaz. vol. 232; p. 72.
Lobdell, Dice R. (See Maupin and Lobdell.)
Lockhart, Joseph C., Attica, Kans. Liquid-fuel burner. No. 1,204,288; Nov. 7; Gaz. vol. 232; p. 255.
Loebinger, Hugo J. (See Bergh, Loebinger, and Neuberger.)
Lohr, Carl A., New York, N. Y. Synchronizing. No. 1,204,169; Nov. 7; Gaz. vol. 232; p. 216.
Lombard, Charles E., East Wilton, Me. Fastening device. No. 1,203,885; Nov. 7; Gaz. vol. 232; p. 118.
Long, Arthur D., Fairfield, Iowa. Brush and broom handle. No. 1,203,886; Nov. 7; Gaz. vol. 232; p. 118.
Lord, Lewis P., assignor of one-third to F. G. Acomb, Minneapolis, Minn., and one-third to W. H. Killen, Appleton, Wis. Berry-picker. No. 1,204,367; Nov. 7; Gaz. vol. 232; p. 283.
Lorillard Refrigerator Co. (See De Canio, Victor A., assignor.)
Louis, Isidore, Kansas City, Mo. Rotary tooth-brush. No. 1,203,636; Nov. 7; Gaz. vol. 232; p. 29.
Lowe, Arthur R., assignor to The Western Shade Cloth Company, Chicago, Ill. Treating shades and the like. No. 1,203,758; Nov. 7; Gaz. vol. 232; p. 73.
Lowy, Alexander, New York, N. Y. Analytical pipette. No. 1,204,368; Nov. 7; Gaz. vol. 232; p. 283.
Lucas, John T., assignor of one-third to L. F. Blyler and one-third to A. H. Rand, Minneapolis, Minn. Washboiler. No. 1,204,369; Nov. 7; Gaz. vol. 232; p. 283.
Luckett, William S., Philadelphia, Pa. Combined cigar-cutter and lid-holder. No. 1,204,289; Nov. 7; Gaz. vol. 232; p. 256.
Lumbers, James H. (See Doust, James C., assignor.)
Lundell, Alben E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Machine-switching telephone-exchange system. No. 1,203,887; Nov. 7; Gaz. vol. 232; p. 118.
Lundin Company, The. (See Broady, Harry W., assignor.)
Lutz, William F., Brooklyn, N. Y. Butcher's knife. No. 1,203,637; Nov. 7; Gaz. vol. 232; p. 29.
Luxmore, William, Chicago, Ill. Vehicle-driving mechanism. No. 1,203,638; Nov. 7; Gaz. vol. 232; p. 29.
Luyken, Wilhelm, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Electric motor. No. 1,204,290; Nov. 7; Gaz. vol. 232; p. 256.
M. D. Knowlton Company. (See Hawkins, Edgar M., assignor.)
MacGregor, John R. (See Schaeffer and MacGregor.)
MacWilliams, Charles W., Geneva, Nebr. Overshoe. No. 1,204,293; Nov. 7; Gaz. vol. 232; p. 258.
Madden, Edward, Amsterdam, N. Y. Mixing-valve. No. 1,204,047; Nov. 7; Gaz. vol. 232; p. 174.
Maddock, Harold S., assignor to Thomas Maddock's Sons Company, Trenton, N. J. Water-closet. No. 1,204,048; Nov. 7; Gaz. vol. 232; p. 174.
Magee, Chauncey L. C., assignor to Federal Steel Fixture Company, Chicago, Ill. Metal shelving. No. 1,204,174; Nov. 7; Gaz. vol. 232; p. 218.
Mail-om-eter Company. (See Straight, Bennett D., assignor.)
Mailhot, Joseph H., Detroit, Mich. Steam-trap. No. 1,203,639; Nov. 7; Gaz. vol. 232; p. 30.
Maison, Harry. (See Davey and Maison.)
Malcik, John A., Cistern, Tex. Hay-rack. No. 1,204,372; Nov. 7; Gaz. vol. 232; p. 285.
Malicki, John, Amsterdam, N. Y. Combined cigarette and match box. No. 1,203,640; Nov. 7; Gaz. vol. 232; p. 31.
Maliniak, Jan, Perth Amboy, N. J. Car-starter. No. 1,203,889; Nov. 7; Gaz. vol. 232; p. 119.
Malloy, Edward T., *et al.* (See Janzen, Franz, assignor.)
Malm, John A., Diamond, S. D. Vibratory straw-carrier. No. 1,203,760; Nov. 7; Gaz. vol. 232; p. 73.
Mamel, William W., Sr., assignor to G. E. Haring, New York, N. Y. Machine for pitting fruit. No. 1,204,175; Nov. 7; Gaz. vol. 232; p. 218.
Mannon, Francis S., Newport, Oreg. Mowing-machine. No. 1,203,890; Nov. 7; Gaz. vol. 232; p. 120.
Manson, Ray H., assignor to The Garford Manufacturing Company, Elyria, Ohio. Circuit-controller. No. 1,203,641; Nov. 7; Gaz. vol. 232; p. 31.
Marcroft, William, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Thread-guide for textile-machines. No. 1,204,294; Nov. 7; Gaz. vol. 232; p. 258.
Margetts, William H., Toronto, Ontario, Canada. Shading-machine. No. 1,203,761; Nov. 7; Gaz. vol. 232; p. 74.
Markowitz, Samuel, New York, N. Y. Device for opening eggs. No. 1,203,891; Nov. 7; Gaz. vol. 232; p. 120.
Martijn, Hendrikus J. (See Van Calcar, Ellerman, and Martijn.)
Martinson, Alfred, Rock Island, Ill. Sickle-bar holder. No. 1,204,295; Nov. 7; Gaz. vol. 232; p. 258.
Mastin, Charles I. E., Midland Park, N. J. Gasket. No. 1,203,762; Nov. 7; Gaz. vol. 232; p. 74.
Matheson, Archibald J., Virgelle, Mont. Transmission-gearing. No. 1,203,892; Nov. 7; Gaz. vol. 232; p. 120.
Matthews, David J., Seattle, Wash. Dispensing device. No. 1,203,763; Nov. 7; Gaz. vol. 232; p. 74.
Maupin, William H., and D. R. Lobdell, Lemmon, S. D. Internal-combustion engine. No. 1,204,296; Nov. 7; Gaz. vol. 232; p. 258.
Maxwell, George S., assignor of one-half to M. A. Bayles, Washington, D. C., and W. F. Hale, Nokesville, Va. Automobile-wheel traction device. No. 1,203,764; Nov. 7; Gaz. vol. 232; p. 75.
Maxwell, Ralph S., assignor of one-half to J. M. Parker, Portland, Oreg. Automobile-truck. No. 1,204,049; Nov. 7; Gaz. vol. 232; p. 175.
McCaskey, John L., assignor to Pittsburgh Game & Novelty Company, Pittsburgh, Pa. Game apparatus. No. 1,204,291; Nov. 7; Gaz. vol. 232; p. 257.
McCaslin, Harry M., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y. Fire-extinguisher. No. 1,204,040; Nov. 7; Gaz. vol. 232; p. 171.
McCaslin, Harry M., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y. Hand fire-extinguisher. No. 1,204,041; Nov. 7; Gaz. vol. 232; p. 171.
McClellon, James M. (See Doherty, Harry B., assignor.)
McClure, Fred C. (See McClure, John H., assignor.)
McClure, John H., assignor of one-half to F. C. McClure, Detroit, Mich. Combined switch and box lock. No. 1,204,042; Nov. 7; Gaz. vol. 232; p. 172.

McColl, Francis P., St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill. Apparatus for soldering cans. No. 1,204,170; Nov. 7; Gaz. vol. 232; p. 216.
McComb, William E., Cameron, Mo. Feed-water purifier. No. 1,204,370; Nov. 7; Gaz. vol. 232; p. 284.
McCormick, Edmund B., Manhattan, Kans. Torsion-dynamometer. No. 1,204,292; Nov. 7; Gaz. vol. 232; p. 257.
McCullouch, William H. (See Zarth, Otto, assignor.)
McDermott, Albert H. (See Stearns and McDermott.)
McDonough, James, Montclair, N. J. Horseshoe-calk. No. 1,204,043; Nov. 7; Gaz. vol. 232; p. 172.
McFaddin, Harrison D., East Orange, N. J. Lighting-fixture. No. 1,204,044; Nov. 7; Gaz. vol. 232; p. 172.
McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Belt-controlling device. No. 1,204,371; Nov. 7; Gaz. vol. 232; p. 284.
McFrederick, L. B., *et al.* (See Fuller, Charles, assignor.)
McGowan, William L., Galt, Mo. Hog-ringer. No. 1,204,045; Nov. 7; Gaz. vol. 232; p. 173.
McKay, Nelson L., Walden, N. Y. Sanitary drinking-tube. No. 1,204,171; Nov. 7; Gaz. vol. 232; p. 217.
McKibbin, John B., Crafton, assignor of three-eighths to E. J. Sugden, Pittsburgh, Pa. Continuous rolling-mill. No. 1,203,888; Nov. 7; Gaz. vol. 232; p. 119.
McLaughlin, John E., Utica, N. Y. Seam. No. 1,204,046; Nov. 7; Gaz. vol. 232; p. 173.
McLaughlin, Thomas, assignor of one-half to The Hartley Steel Crated Box Company, Saginaw, Mich. Egg tester and delivery box. No. 1,204,172; Nov. 7; Gaz. vol. 232; p. 217.
McMeekin, Thomas J., Jacksonville, Fla. Curtain-fastener. No. 1,204,173; Nov. 7; Gaz. vol. 232; p. 217.
McQuillin, Howard, Chicago, Ill. Dynamo-electric machine. No. 1,203,759; Nov. 7; Gaz. vol. 232; p. 73.
Mechanical Construction Company, The. (See Hanna, William T., assignor.)
Meckbach, Ernst, Opladen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Color-lakes fast to light. No. 1,203,642; Nov. 7; Gaz. vol. 232; p. 31.
Merrill, Jesse S., *et al.* (See Moore, David P., assignor.)
Metallurgical Engineering & Process Corporation. (See Robinson, Cyrus, assignor.)
Meyers, Hoy A., Edon, Ohio. Container. No. 1,204,050; Nov. 7; Gaz. vol. 232; p. 175.
Mieden, Adam, Reno, Nev. Clip. No. 1,204,373; Nov. 7; Gaz. vol. 232; p. 285.
Millbourn, James, assignor to Gas Engine & Power Co. and Charles L. Seabury & Co., Consolidated, New York, N. Y. Hydrocarbon-burner. No. 1,204,051; Nov. 7; Gaz. vol. 232; p. 175.
Miller, Charles B., Meriden, assignor to Berbecker & Rowland Manufacturing Company, Waterville, Conn. Curtain-rod bracket. No. 1,203,765; Nov. 7; Gaz. vol. 232; p. 75.
Miller, George O., North Tonawanda, N. Y. Valve. No. 1,203,766; Nov. 7; Gaz. vol. 232; p. 75.
Miller, Joseph J., Duluth, Minn. Lawn-sprinkler. No. 1,204,297; Nov. 7; Gaz. vol. 232; p. 259.
Millican, Claude E., Rome, Ga. Picture-frame. No. 1,203,893; Nov. 7; Gaz. vol. 232; p. 120.
Milligan, John F., New York, N. Y., assignor to Automatic Coinwrapping Company. Feed-roll clutch. No. 1,203,894; Nov. 7; Gaz. vol. 232; p. 121.
Milwaukee Optical Manufacturing Company. (See Ingold, Carl F., assignor.)
Mire, Joseph C., Dreyfus, La. Attachment for cultivators. No. 1,204,298; Nov. 7; Gaz. vol. 232; p. 259.
Mischonsniky, Simon. (See Zollinger and Mischonsniky.)
Mitchell, Alexander I., assignor to National Toy Company, Boston, Mass. Puzzle. No. 1,204,382; Nov. 7; Gaz. vol. 232; p. 288.
Mitchell, David C., Pittsburgh, Pa. Train-pipe valve. No. 1,204,176; Nov. 7; Gaz. vol. 232; p. 219.
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Needle-clamp for sewing-machines. No. 1,203,895; Nov. 7; Gaz. vol. 232; p. 121.
Mohr, George W., Jersey City, N. J. Feed-water apparatus. No. 1,204,052; Nov. 7; Gaz. vol. 232; p. 176.
Molloy, Charles L., Chicago, Ill. Suspenders. No. 1,203,643; Nov. 7; Gaz. vol. 232; p. 32.
Moody, James N., Waynesboro, Va. Tractor. No. 1,204,299; Nov. 7; Gaz. vol. 232; p. 259.
Moore, David P., assignor of one-half to J. S. Merrill, Washington, D. C., and one-half to G. H. Draper, District of Columbia. Triple purification-still. No. 1,204,300; Nov. 7; Gaz. vol. 232; p. 260.
Moore, Robert S., assignor to Gyro Motor Company, Washington, D. C. Gas-engine. No. 1,203,767. Nov. 7; Gaz. vol. 232; p. 76.
Moore, Samuel E., Williamsville, Ill. Culvert. No. 1,203,768; Nov. 7; Gaz. vol. 232; p. 76.
Moore, William E., Janesville, Wis. Clip for fountain-pens. No. 1,204,053; Nov. 7; Gaz. vol. 232; p. 176.
Morie, Joseph T. (See tims and Morie.)
Morrill, Milton D., Washington, D. C., assignor to Read & Morrill, Inc. Sectional mold for concrete walls, floors, ceilings, &c. No. 1,204,177; Nov. 7; Gaz. vol. 232; p. 219.
Morris, Harold B., Glendale, Cal. Covering material for furniture, &c., and making same. No. 1,203,896; Nov. 7; Gaz. vol. 232; p. 121.
Morrison, Joseph O., Anderson, Ind. Mechanical counter. No. 1,203,644; Nov. 7; Gaz. vol. 232; p. 32.
Morton, Harry E., Boston, Mass. Vacuum-breaker. No. 1,204,301; Nov. 7; Gaz. vol. 232; p. 260.
Morton, Harry E., Boston, Mass. Vacuum-breaker. No. 1,204,302; Nov. 7; Gaz. vol. 232; p. 261.
Morton, Harry E., Boston, Mass. Combined vacuum-breaker and non-return valve. No. 1,204,303; Nov. 7; Gaz. vol. 232; p. 261.
Mott, James W., Cresco, Iowa. Headlight-turning mechanism for vehicles. No. 1,203,769; Nov. 7; Gaz. vol. 232; p. 77.
Moxham, Arthur J., Wilmington, Del. Gravity liquid separation of iron ores. No. 1,203,897; Nov. 7; Gaz. vol. 232; p. 122.
Moyer, Fredellia H., Euclid Heights Village, Ohio. Mechanical horn. No. 1,204,304; Nov. 7; Gaz. vol. 232; p. 262.
Muirson Label Company. (See Bentley, Robert I., Jr., assignor.)
Murdock, Harold R., Naugatuck, Conn., assignor to Rubber Regenerating Company. Vulcanizing. No. 1,204,374; No. 7; Gaz. vol. 232; p. 285.
Mussinan, Oscar, New York, N. Y. Pneumatic-cushion heel. No. 1,203,898; Nov. 7; Gaz. vol. 232; p. 122.
Muttart, George W. (See Linkletter, Robert, assignor.)
Mutual Specialty Manufacturing Company. (See Holland, Frank G., assignor.)
Myers, Frederick, assignor to Fred Myers Mfg. Co., New York, N. Y. Mixer. No. 1,203,899; Nov. 7; Gaz. vol. 232; p. 122.
Myers, Laura M., Chicago, Ill. Receptacle for lighted cigars. No. 1,204,178; Nov. 7; Gaz. vol. 232; p. 220.
Myers, Laura M., Chicago, Ill. Fruit-peeler. No. 1,204,179; Nov. 7; Gaz. vol. 232; p. 220.
Nagy, Michael, Cincinnati, Ohio. Bottle-opening device. No. 1,204,305; Nov. 7; Gaz. vol 232; p. 262.
Nahabedian, Lucy, New York, N. Y. Combined vest and petticoat. No. 1,204,054; Nov. 7; Gaz. vol. 232; p. 177.
Nash Manufacturing Company. (See Nash, Thomas J., assignor.)
Nash, Thomas J., assignor to American Aluminum Ware Company, Lincoln, Nebr. Steering-gear attachment. No. 1,203,900; Nov. 7; Gaz. vol. 232; p. 123.
Nash, Thomas J., assignor to Nash Manufacturing Company, Lincoln, Nebr. High-pressure steam-cooker. No. 1,204,055; Nov. 7; Gaz. vol. 232; p. 177.
National Malleable Castings Company, The. (See Bazeley, Arthur J., assignor.)
National Metal Molding Company. (See Robinson, William C., assignor.)
National Toy Company. (See Mitchell, Alexander I., assignor.)
Naylor, Henry A., Valparaiso, Chile. Adjustable fly-wheel. No. 1,204,180; Nov. 7; Gaz. vol. 232; p. 220.
Neal, James H., Cambridge, Mass. Safety device for automobiles. No. 1,204,375; Nov. 7; Gaz. vol. 232; p. 286.
Neeper, Alexander M. (See Whiteside, Robert A., assignor.)
Neidich, Samuel A., Edgewater Park, N. J., assignor to The American Multigraph Company, Cleveland, Ohio. Lithographic plate. No. 1,203,770; Nov. 7; Gaz. vol. 232.; p. 77.
Neuberger, Henry C. (See Bergh, Loebinger and Neuberger.)
New Era Mfg. Co. (See Bunnell, Morton G., assignor.)
Newhouse, Ray C., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Crushing-roll. No. 1,203,901; Nov. 7; Gaz. vol. 232; p. 123.
Newkirk, Nettie A., Roberts, Mont. Hose-supporter. No. 1,204,376; Nov. 7; Gaz. vol. 232; p. 286.
Niagara Alkali Company. (See Walker, James R., assignor.)
Nichols, Emory D., Chicago, Ill. Clasp. No. 1,203,771; Nov. 7; Gaz. vol. 232; p. 77.
Nichols, Reefy M., San Francisco, Cal. Shipping-tag. No. 1,203,902; Nov. 7; Gaz. vol. 232; p. 124.
Nichols, Thomas W., Gateshead, England. Valve-actuating mechanism for fluid-pressure motors. No. 1,203,645; Nov. 7; Gaz. vol. 232; p. 32.
Noble, Ethel L. (See Albanese, Giuseppe S., assignor.)
Nolseless Typewriter Company, The. (See Anderson, Nils H., assignor.)
Norsk Hydro-Elektrisk Kvaelstofaktieselskab. (See Dövle, Carl O. A., assignor.)
Norsk Hydro-elektrisk Kvælstofaktieselskab. (See Holter, Alfred, assignor.)
Norstrand, Hans P. G., assignor to Rathbone, Sard & Company, Albany, N. Y. Stove. No. 1,203,772; Nov. 7; Gaz. vol. 232; p. 78.
Norton, Thomas J., assignor, by mesne assignments, to S. J. Sloan, New York, N. Y. Extensible tablet. No. 1,204,181; Nov. 7; Gaz. vol. 232; p. 221.
Nowell, L. M., *et al.* (See Fuller, Charles, assignor.)
Nystrand, Julia, Seattle, Wash. Silverware-polish. No. 1,203,903; Nov. 7; Gaz. vol. 232; p. 124.
O'Brien, John F. (See Simon and O'Brien.)
O'Brien, William S., Kirkland, Wash. Fireplace. No. 1,203,773; Nov. 7; Gaz. vol. 232; p. 78.
O'Conner, Fred L., Dorchester, Mass. Drum. No. 1,204,182; Nov. 7; Gaz. vol. 232; p. 221.
O'Neal, John. (See Feninger and O'Neal.)

Offerman, Joseph P., assignor to Beaver Dam Manufacturing Co., Beaver Dam, Wis. Supporting mechanism for scraping-blades. No. 1,204,306; Nov. 7; Gaz. vol. 232; p. 262.
Ogden, James L., Jr., Nauvoo, Ill. Dinner-pail. No. 1,203,774; Nov. 7; Gaz. vol. 232; p. 78.
Oliver, David T., New York, N. Y. Humidor. No. 1,203,646; Nov. 7; Gaz. vol. 232; p. 33.
Omealey, George H., Lake Providence, La. Grain-shocker. No. 1,204,183; Nov. 7; Gaz. vol. 232; p. 221.
Orner, Frank M., Chaseley, N. D. Plow attachment. No. 1,204,184; Nov. 7; Gaz. vol. 232; p. 221.
Ortengren, Alfred, Brooklyn, N. Y., assignor to E. Christie, Weehawken, N. J. Tractor driving-gear. No. 1,203,647; Nov. 7; Gaz. vol. 232; p. 33.
Otey, George S., assignor to The Hesse Envelope Company, Dallas, Tex. Envelop-machine. No. 1,203,904; Nov. 7; Gaz. vol. 232; p. 124.
Overman, Max C., New York, N. Y. Securing means for vehicle-tires. No. 1,203,648; Nov. 7; Gaz. vol. 232; p. 33.
Paessler, Robert T., Wilkes-Barre, Pa. Shortening composition. No. 1,203,905; Nov. 7; Gaz. vol. 232; p. 125.
Page, Alfred C. (See Booth and Page.)
Page, Arthur A., Albany, N. Y. Pallet for air-operated musical instruments. No. 1,203,775; Nov. 7; Gaz. vol. 232; p. 79.
Papuga, Vasilj, South Omaha, Nebr. Multiple cartridge. No. 1,203,649; Nov. 7; Gaz. vol. 232; p. 34.
Paridon, Michael, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Automatic stopping and starting mechanism for match-packing machines. No. 1,203,906; Nov. 7; Gaz. vol. 232; p. 125.
Park, Henry B., Lagrange, Ga. Sanitary attachment for mouthpieces. No. 1,204,307; Nov. 7; Gaz. vol. 232; p. 262.
Parker, Charles W. (See Wittliff and Parker.)
Parker, Julia M. (See Maxwell, Ralph S., assignor.)
Parkes, Edgar I., Bushey, England. Ceiling-rose. No. 1,203,650; Nov. 7; Gaz. vol. 232; p. 34.
Paschal, Thomas M., San Antonio, Tex. Chemical heater and composition of matter therefor. No. 1,203,776; Nov. 7; Gaz. vol. 232; p. 79.
Perlman, Henry, Philadelphia, Pa. Electric pack. No. 1,204,185; Nov. 7; Gaz. vol. 232; p. 222.
Perry, Arthur S., Los Angeles, Cal. Vehicle-signal. No. 1,204,186; Nov. 7; Gaz. vol. 232; p. 222.
Persons, James O., Norfolk, Va. Non-inflammable waterproofing composition. No. 1,204,056; Nov. 7; Gaz. vol. 232; p. 177.
Peter, John W., Fostoria, Ohio. Wire-holding stand. No. 1,204,308; Nov. 7; Gaz. vol. 232; p. 263.
Peters, John F., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Polyphase-current-limiting reactance-coil. No. 1,204,377; Nov. 7; Gaz. vol. 232; p. 286.
Peterson, Carl M., Chester, Mont. Muffler. No. 1,203,777; Nov. 7; Gaz. vol. 232; p. 79.
Peterson, John, Saratoga Springs, N. Y. Irrigating device. No. 1,204,309; Nov. 7; Gaz. vol. 232; p. 263.
Pfeifer, Leo L., assignor to The John W. Brown Manufacturing Company, Columbus, Ohio. Lamp construction. No. 1,204,057; Nov. 7; Gaz. vol. 232; p. 178.
Pfeiffer, Carl A., New York, N. Y. Boat-hull. No. 1,204,58; Nov. 7; Gaz. vol. 232; p. 178.
Phenice, Esther A., executrix. (See Phenice, William H.)
Phenice, William H., deceased; E. A. Phenice, executrix, White Hall, Ill. Kitchen-cabinet. No. 1,204,059; Nov. 7; Gaz. vol. 232; p. 178.
Philipps, August and O., Frankfort-on-the-Main, Germany. Pneumatic variable-tension regulators for musical instruments. No. 1,204,310; Nov. 7; Gaz. vol. 232; p. 263.
Philipps, Oswald. (See Philipps, August and O.)
Philips-Brinton Company. (See Brinton, William C., Jr., assignor.)
Phillips, Walter M., Portsmouth, Ohio. Attachment for wind instruments. No. 1,204,060; Nov. 7; Gaz. vol. 232; p. 179.
Picher Lead Company. (See Schaeffer and MacGregor, assignors.)
Pickrell, John, Louisville, Ky. Fence-post. No. 1,204,187; Nov. 7; Gaz. vol. 232; p. 222.
Pickup, George E., assignor to The Wehrle Company, Newark, Ohio. Gas-plate. No. 1,203,907; Nov. 7; Gaz. vol. 232; p. 125.
Pieper, Alphonse F. (See Pieper, Oscar H. and A. F.)
Pieper, Oscar H. and A. F., Rochester, N. Y. Fluid-pump. No. 1,203,651; Nov. 7; Gaz. vol. 232; p. 34.
Piqua Machine and Boiler Co., The. (See Simon and O'Brien, assignors.)
Pittsburgh Game & Novelty Company. (See McCaskey, John L., assignor.)
Pittsburgh Meter Company. (See Chrisman, Horace, assignor.)
Plekenpol, Bernard and J. B., Cleveland, Ohio. Refrigerating apparatus. No. 1,204,061; Nov. 7; Gaz. vol. 232; p. 179.
Plekenpol, John B. (See Plekenpol, Bernard and J. B.)
Plugge, Anthony L., Grand Rapids, Mich. Signal device. No. 1,204,311; Nov. 7; Gaz. vol. 232; p. 264.
Pogue, George D., St. Louis, Mo. Variable-feed pump. No. 1,204,062; Nov. 7; Gaz. vol. 232; p. 179.
Postal Supply and Manufacturing Company, The. (See Fulk, George L., assignor.)
Pratt, George L., Atlanta, Ga. Bearing for shafts, spindles, and the like. No. 1,204,063; Nov. 7; Gaz. vol. 232; p. 180.
Pratt, George W., Oakland, Cal. Policeman's nippers and handcuffs combined. No. 1,203,778; Nov. 7; Gaz. vol. 232; p. 79.
Preble, Frank H., *et al.* (See Gilliam, Hugh C., assignor.)
Preston, Percy, Denison, Tex. Reed-organ. No. 1,204,064; Nov. 7; Gaz. vol. 232; p. 180.
Prifold, George, Linwood, Pa., assignor, by mesne assignments, to United Roofing & Manufacturing Company Wilmington, Del. Block-printing machine. No. 1,204,312; Nov. 7; Gaz. vol. 232; p. 264.
Projectophone Company Inc. (See Von Madaler, Katharina, assignor.)
Putnam, Fred A., Melrose, Mass. Printing composition. No. 1,203,779; Nov. 7; Gaz. vol. 232; p. 80.
Pye, Alfred L., assignor to Rochester Folding Box Company, Rochester, N. Y. Feed mechanism. No. 1,204,188; Nov. 7; Gaz. vol. 232; p. 223.
R. K. Le Blond Machine Tool Company, The. (See Le Blond and Groene, assignors.)
R. E. Dietz Company. (See Throne, Robert P., assignor.)
Radke, Theodore J., Oak Park, Ill. Automatic water-heater. No. 1,204,313; Nov. 7; Gaz. vol. 232; p. 264.
Rahm, Robert C., and T. V. Wilson, Wyomissing borough, assignors to Textile Machine Works, Wyomissing, Pa. Braiding and coating mechanism. No. 1,204,065; Nov. 7; Gaz. vol. 232; p. 181.
Rail Joint Company, The. (See Braine, Bancroft G., assignor.)
Rainbow, Frederick L., Dundee, assignor to Illinois Iron & Bolt Company, Carpentersville, Ill. Drill. No. 1,203,780; Nov. 7; Gaz. vol. 232; p. 80.
Ramsay, William A., Honolulu, Hawaii. Means for conveying macerated bagasse between sugar-mills. No. 1,204,314; Nov. 7; Gaz. vol. 232; p. 265.
Rand, A. H., *et al.* (See Lucas, John T., assignor.)
Rapid Button Attaching Machine Co. (See Richardson, Charles F., assignor.)
Rassmann, Hugo E., Beaver Dam, Wis. Watering device for cattle. No. 1,204,066; Nov. 7; Gaz. vol. 232; p. 181.
Rathbone, Sard & Company. (See Norstrand, Hans P. G., assignor.)
Ratycia, Harry, New York N. Y. Novelty device. No. 1,203,781; Nov. 7; Gaz. vol. 232; p. 81.
Rawie, Franz, Osnabrück-Schinkel, Germany. Railway-buffer construction. No. 1,204,189; Nov. 7; Gaz. vol. 232; p. 223.
Raymond, Frederic M., Cleveland, Ohio. Cable-clamp. No. 1,203,782; Nov. 7; Gaz. vol. 232; p. 81.
Read & Morrill. (See Morrill, Milton D., assignor.)
Reischmann, Henry R., New York, N. Y. Folding table. No. 1,203,783; Nov. 7; Gaz. vol. 232; p. 81.
Reiter, Caspar, Bayrischsell-Hochkreut, Germany. Making practically alcohol-free beers. No. 1,204,315; Nov. 7; Gaz. vol. 232; p. 265.
Remington Typewriter Company. (See Seib, George A., assignor.)
Remsen, Herbert D. (See Ward, Remsen, and Boerner.)
René Squeegee Company. (See Ayotle, Joseph R., assignor.)
Renner, William, assignor of one-half to J. H. Davis, Columbus, Ohio. Stop-valve. No. 1,204,316; Nov. 7; Gaz. vol. 232; p. 265.
Revere Rubber Company. (See Cobb, Henry Z., assignor.)
Reynolds, John N., Greenwich, Conn., assignor, by mesne assignments, to Western Electric Company, Incorporated. Machine-switching telephone-exchange system. No. 1,203,908; Nov. 7; Gaz. vol. 232; p. 126.
Rhodes, Bert O., assignor to Acme Universal Joint Company, Kalamazoo, Mich. Universal joint. No. 1,203,190; Nov. 7; Gaz. vol. 232; p. 223.
Richard, Leroy L., Coalinga, assignor of one-half to S. A. Guiberson, Jr., San Francisco, Cal. Sand-pump for wells. No. 1,203,784; Nov. 7; Gaz. vol. 232; p. 82.
Richardson, Charles F., Woonsocket, R. I., assignor to Rapid Button Attaching Machine Co., New York, N. Y. Button-feeding mechanism. No. 1,204,067; Nov. 7; Gaz. vol. 232; p. 181.
Rickards, Burt R., Melrose, Mass. Eye-shield. No. 1,203,785; Nov. 7; Gaz. vol. 232; p. 82.
Ricords, Frederick, Brooklyn, N. Y. Case for tennis-racket frames. No. 1,203,786; Nov. 7; Gaz. vol. 232; p. 82.
Rietveld, Gideon, Knoxville, Iowa. Match-box. No. 1,203,787; Nov. 7; Gaz. vol. 232; p. 82.
Rigney, Meakin, assignor of one-half to N. C. Taliaferro, Detroit, Mich. Mail-bag catcher. No. 1,203,652; Nov. 7; Gaz. vol. 232; p. 35.
Rivers, George W., Aberdeen, N. C., assignor to C. N. Brasington, Bennettsville, S. C. Threshing-machine. No. 1,204,191; Nov. 7; Gaz. vol. 232; p. 224.
Roberts, Henry P., Roxbury, Mass. Apparatus for freezing liquids. No. 1,204,317; Nov. 7; Gaz. vol. 232; p. 266.
Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,204,192; Nov. 7; Gaz. vol. 232; p. 224.
Robin, Benjamin, and J. Caplin, Washington, D. C. Cash-purse or tobacco-bag. No. 1,204,068; Nov. 7; Gaz. vol. 232; p. 182.

Robinson, Cyrus, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation. Agitator for ore treatment. No. 1,204,069; Nov. 7; Gaz. vol. 232; p. 182.

Robinson, Cyrus, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation. Dehydrater. No. 1,204,070; Nov. 7; Gaz. vol. 232; p. 183.

Robinson, William C., assignor to National Metal Holding Company, Pittsburgh, Pa. Flexible electrical conduit. No. 1,203,788; Nov. 7; Gaz. vol. 232; p. 83.

Robt. H. Ingersoll & Bro. (See Eberhard, George F., assignor.)

Rochester Folding Box Company. (See Pye, Alfred L., assignor.)

Roesler, Joseph H. P. J. (See Weins and Roesler.)

Roever, August E., Brooklyn, N. Y. Power-transmitting device. No. 1,203,653; Nov. 7; Gaz. vol. 232; p. 35.

Rosenberg, George R., White Cloud, Mich. Steering-gear for motor-vehicles. No. 1,204,193; Nov. 7; Gaz. vol. 232; p. 225.

Rosenthal, August, West Allis, Wis. Filter. No. 1,204,071; Nov. 7; Gaz. vol. 232; p. 183.

Roy, Serena L., administratrix. (See Roy, Sylvanus B.)

Roy, Sylvanus B., deceased, Worcester, Mass.; S. L. Roy, administratrix, assignor to B. S. Roy & Son Company. Automatic door-operating device. No. 1,204,318; Nov. 7; Gaz. vol. 232; p. 266.

Royack, Nathan, Brooklyn, N. Y. Door-opening device. No. 1,204,072; Nov. 7; Gaz. vol. 232; p. 184.

Rubber Regenerating Company. (See Murdock, Harold R., assignor.)

Ruckle, Edward H., assignor to Hughes Electric Heating Company, Chicago, Ill. Electric baker's oven. No. 1,203,909; Nov. 7; Gaz. vol. 232; p. 126.

Rudolph Wurlitzer Manufacturing Company. (See Hope-Jones, Robert, assignor.)

Rushton, Kenneth, assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Means for lubricating clutches. No. 1,204,194; Nov. 7; Gaz. vol. 232; p. 225.

Russell, Burdsall & Ward Bolt and Nut Co. (See Burdsall, Ellwood, assignor.)

Russell, Burdsall & Ward Bolt and Nut Co. (See Ward, Remsen, and Boerner, assignors.)

Ryden, Claes, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Electrical coil and winding same. No. 1,203,789; Nov. 7; Gaz. vol. 232; p. 83.

Ryden, Claes, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Winding-machine. No. 1,203,790; Nov. 7; Gaz. vol. 232; p. 83.

Safety First Air Brake Company (Canada) Limited. (See Humphrey, Edward R., assignor.)

Saino, Felix L., Memphis, Tenn. Fire door or shutter. No. 1,204,074; Nov. 7; Gaz. vol. 232; p. 184.

Salisbury, Albert E. (See Bastian and Salisbury.)

Sandgeroth, Theodore, Anoka, Nebr. Non-refillable bottle. No. 1,204,073; Nov. 7; Gaz. vol. 232; p. 184.

Sarphie, Joseph E., Hattiesburg, Miss. Tie-clasp. No. 1,204,075; Nov. 7; Gaz. vol. 232; p. 185.

Saunders, Elias. (See Degener and Saunders.)

Savage, Arthur J., assignor to The Savage Tire Company, San Diego, Cal. Vehicle-tire. No. 1,203,910; Nov. 7; Gaz. vol. 232; p. 126.

Savage Tire Company, The. (See Savage, Arthur J., assignor.)

Saylor, Earl E., Campbell, Nebr. Attachment for grain-binders. No. 1,204,319; Nov. 7; Gaz. vol. 232; p. 266.

Schaap, Leigh R., Longmont, Colo. Inner tube for pneumatic tires. No. 1,203,654; Nov. 7; Gaz. vol. 232; p. 35.

Schaeffer, John A., Joplin, Mo., and J. R. MacGregor, Chicago, Ill., assignors to Picher Lead Company, Joplin, Mo. Manufacturing lead carbonates. No. 1,203,911; Nov. 7; Gaz. vol. 232; p. 127.

Schafer, Frank, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Feed mechanism for box-shuck machines. No. 1,203,912; Nov. 7; Gaz. vol. 232; p. 127.

Schafer, Frank, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Mechanical movement. No. 1,203,913; Nov. 7; Gaz. vol. 232; p. 127.

Schafer, Frank, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Mechanical movement. No. 1,203,914; Nov. 7; Gaz. vol. 232; p. 127.

Scheffknecht, Isidor, Lustenau, Austria-Hungary, assignor to K. Fenkart, Rorschach, Switzerland. Device for embellishing embroidery. No. 1,204,195; Nov. 7; Gaz. vol. 232; p. 225.

Schickel, Norbert H., Stamford, Conn. Charge-treating device for internal-combustion engines. No. 1,203,791; Nov. 7; Gaz. vol. 232; p. 84.

Schleicher, John A., Wilkes-Barre, and C. V. Wilgus, Kingston, assignors to The Adder Machine Company, Wilkes-Barre, Pa. Keyboard. No. 1,203,655; Nov. 7; Gaz. vol. 232; p. 35.

Schleit, Willis A. (See Skinner, Alba A. and F. B., assignors.) (Reissue.)

Schmidt, Fred, South Milwaukee, Wis. Mail-bag catching and delivering apparatus. No. 1,203,792; Nov. 7; Gaz. vol. 232; p. 84.

Schmitt, Eugene, New York, N. Y. Vehicle-wheel tire. No. 1,203,915; Nov. 7; Gaz. vol. 232; p. 128.

Schmoeger, William, Russellville, Mo. Wire-stretcher. No. 1,204,076; Nov. 7; Gaz. vol. 232; p. 185.

Schneider, Christian. (See Gonsior, Frank, and Schneider.)

Schneider, Richard F., Chicago, Ill. Hand-lantern. No. 1,203,793; Nov. 7; Gaz. vol. 232; p. 84.

Schoenthaler, Fred C. (See Hachmann, Frederick, assignor.)

Schroeder, Jacob A., assignor to M. Schroeder, Piqua, Ohio. Street-sweeping machine. No. 1,204,320; Nov. 7; Gaz. vol. 232; p. 267.

Schroeder, Mary. (See Schroeder, Jacob A., assignor.)

Schroeder, William A., Everett, Wash. Pianissimo device for grand-piano actions. No. 1,204,077; Nov. 7; Gaz. vol. 232; p. 185.

Schulz, Rudolph W., Waterloo, Iowa. Adjustable support for insulators. No. 1,204,196; Nov. 7; Gaz. vol. 232; p. 226.

Schwarz, Albert, assignor of one-tenth to F. A. Doyle, Chicago, Ill. Bullet-proof shield. No. 1,203,916; Nov. 7; Gaz. vol. 232; p. 128.

Schwarz, Philip, and W. J. Baker, Oklahoma, Okla. Sub-irrigation device. No. 1,203,794; Nov. 7; Gaz. vol. 232; p. 85.

Schweitzer, Edmund O. (See Hecht, Julius L., assignor.)

Scotford, Louis K., Chicago, Ill. Sound-box. No. 1,204,197; Nov. 7; Gaz. vol. 232; p. 226.

Scott, Abner L. (See Scott, Harvey E. and A. L.)

Scott, Harvey E. and A. L., Alleene, Ark. Railway-track construction. No. 1,204,198; Nov. 7; Gaz. vol. 232; p. 226.

Scudder, Ernest C., Farmington, Ill. Photographic-printing frame. No. 1,203,917; Nov. 7; Gaz. vol. 232; p. 128.

Sears, Roebuck and Company. (See Huffman, Estil J., assignor.)

Seib, George A., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,203,795; Nov. 7; Gaz. vol. 232; p. 85.

Self, Edward D., Florence, Italy. Automobile. No. 1,203,796; Nov. 7; Gaz. vol. 232; p. 85.

Sensiba, Edward H. (See Lauchin, George Y., assignor.)

Sexton, Isaac E., West Medford, Mass. Can for gasolene, &c. No. 1,203,797; Nov. 7; Gaz. vol. 232; p. 86.

Shannon, William T., Cincinnati, Ohio. Metal culvert. No. 1,203,656; Nov. 7; Gaz. vol. 232; p. 36.

Sharp-Hughes Tool Company. (See Hughes, Howard R., assignor.)

Sheckler, John H., Chicago, Ill., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,203,657; Nov. 7; Gaz. vol. 232; p. 36.

Sherman, James M., Houston, Tex. Ratchet-drill. No. 1,204,199; Nov. 7; Gaz. vol. 232; p. 227.

Shipp, Clarence C., Indianapolis, Ind. Wall-ventilating duct. No. 1,204,321; Nov. 7; Gaz. vol. 232; p. 267.

Shotto, Theodore W., Scranton, Pa. Lock for elevator hoisting-engines. No. 1,204,322; Nov. 7; Gaz. vol. 232; p. 267.

Shrauger, Darius E., Atlantic, Iowa. Sheet-metal board-roof batten. No. 1,204,200; Nov. 7; Gaz. vol. 232; p. 227.

Sibley, Nettie E., Springfield, Mass. Flesh-file. No. 1,203,918; Nov. 7; Gaz. vol. 232; p. 129.

Sieber, Ernest J., Ross township, Allegheny, assignor to Standard Sanitary Manufacturing Company, Pittsburgh, Pa. Mixing-valve. No. 1,203,798; Nov. 7; Gaz. vol. 232; p. 86.

Sievers, Rose M. *et al.* (See Wales, Marie S., assignor.)

Siggers, Edward G. (See Chisholm, Charles L., assignor.)

Simon, Forrest C., and J. F. O'Brien, assignors to The Piqua Machine and Boiler Co., Piqua, Ohio. Box topping and taping machine. No. 1,204,079; Nov. 7; Gaz. vol. 232; p. 186.

Simpson, Charles A., Boston, Mass. Bottle-stopper and pipette. No. 1,203,919; Nov. 7; Gaz. vol. 232; p. 129.

Single Service Package Corporation, The. (See Beadle, George W., assignor.)

Skidd, Charles, Kenosha, Wis. Holding apparatus. No. 1,204,078; Nov. 7; Gaz. vol. 232; p. 185.

Skinner, Alba A., deceased, and F. B. Skinner, Greene, N. Y., assignors by mesne assignments, to W. A. Schleit, Syracuse, N. Y. Combined incubator and brooder. (Reissue.) No. 14,212; Nov. 7; Gaz. vol. 232; p. 290.

Skinner, Fred B. (See Skinner, Alba A. and F. B. (Reissue.)

Slater, Stephen, Middletown, N. Y. Music-leaf turner. No. 1,204,080; Nov. 7; Gaz. vol. 232; p. 186.

Slavik, John F., Poughkeepsie, N. Y. Tool-holder. No. 1,203,799; Nov. 7; Gaz. vol. 232; p. 87.

Slick, Edwin E., Westmont borough, Pa. Mine-car wheel. No. 1,203,800; Nov. 7; Gaz. vol. 232; p. 87.

Slick, Edwin E., Westmont borough, Pa. Car-body. No. 1,203,801; Nov. 7; Gaz. vol. 232; p. 87.

Sloan, Samuel J. (See Norton, Thomas J., assignor.)

Slyfield, Charles, Chaseville, Fla. Fence-post. No. 1,203,920; Nov. 7; Gaz. vol. 232; p. 129.

Smith, Eric M., Okanogan, Wash. Tool-holder. No. 1,203,921; Nov. 7; Gaz. vol. 232; p. 130.

Smith, Franklin E., assignor to Vickers Limited, Westminster, London, England. Charging or replenishing receptacles with gases under pressure. No. 1,203,922; Nov. 7; Gaz. vol. 232; p. 130.

Smith, John J. C., Passaic, assignor to P. M. Hammalian, Hackensack, N. J. Apparatus for etching plates in photo-engraving. No. 1,203,802; Nov. 7; Gaz. vol. 232; p. 87.
Smith, Karl D., assignor to Union Steam Pump Company, Battle Creek, Mich. Sanitary milk-pump. No. 1,203,923; Nov. 7; Gaz. vol. 232; p. 130.
Smith, Stephen T., Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Copy-holder. No. 1,203,659; Nov. 7; Gaz. vol. 232; p. 37.
Snare, William, *et al.* (See Cashel, Andrew J., assignor.)
Snyder, Vernon C., Chicago, Ill., assignor to American Can Company, New York, N. Y. Folding carton. No. 1,203,924; Nov. 7; Gaz. vol. 232; p. 132.
Sohn, Jerome V., Saybrook, Ill. Farm implement. No. 1,204,323; Nov. 7; Gaz. vol. 232; p. 267.
Spanier, Waldemar H., Grand Harbor, N. D. Wrench. No. 1,204,383; Nov. 7; Gaz. vol. 232; p. 288.
Sparks, Le Grand, Montgomery, N. Y. Elevating-jack. No. 1,203,925; Nov. 7; Gaz. vol. 232; p. 132.
Speers, Louise T., Rochester, N. Y. Vaginal syringe. No. 1,203,803; Nov. 7; Gaz. vol. 232; p. 88.
Speight, Alfred, Wimbledon Park, assignor of one-half to John Hall & Sons (Bristol & London) Limited, Bristol, England. Means for raising and lowering vehicle and other windows. No. 1,204,201; Nov. 7; Gaz. vol. 232; p. 227.
Spencer, Frank, Louisville, Ky. Marbleizing cement. No. 1,204,378; Nov. 7; Gaz. vol. 232; p. 287.
Sprague, Parker B., Denver, Colo. Liquid-measuring device. No. 1,204,324; Nov. 7; Gaz. vol. 232; p. 268.
Spring, Thomas E., Pittsburgh, Pa. Lid-raising device. No. 1,204,325; Nov. 7; Gaz. vol. 232; p. 268.
Stabel, Joseph M., assignor to Domestic Appliances Company, Rochester, N. Y. Safety appliance for gas apparatus. No. 1,204,081; Nov. 7; Gaz. vol. 232; p. 187.
Stafford, James M., Washington, Ind. Water-elevator. No. 1,203,926; Nov. 7; Gaz. vol. 232; p. 132.
Stagni, Giuseppe, Turin, Italy. Motor fore-carriage for bicycles and similar vehicles. No. 1,203,927; Nov. 7; Gaz. vol. 232; p. 133.
Standard Oil Company of New York. (See Bemis, William E., assignor.)
Standard Ordnance Corporation, The. (See Bellamore, David H., assignor.)
Standard Sanitary Manufacturing Company. (See Sieber, Ernest J., assignor.)
Standard Varnish Works. (See Beausejour, Reme A., assignor.)
Starin, Frank, Springfield, Mass. Cage for ball-bearings. No. 1,203,928; Nov. 7; Gaz. vol. 232; p. 133.
Stark, Abraham S., New York, N. Y. Watchcase. No. 1,204,082; Nov. 7; Gaz. vol. 232; p. 187.
Starke, Augusta G. (See Starke, Frederick W. and A. G.)
Starke, Frederick W. and A. G., West Orange, N. J. Garment gage and marker. No. 1,203,929; Nov. 7; Gaz. vol. 232; p. 133.
Starr, Alden B., New York, N. Y. Apparatus for manufacturing cement boards. No. 1,204,083; Nov. 7; Gaz. vol. 232; p. 187.
Stearns, Worth R., and A. H. McDermott, Spokane, Wash. Label-affixer. No. 1,203,660; Nov. 7; Gaz. vol. 232; p. 38.
Steele, George R., Newtonville, Mass. Ledger-sheet. No. 1,203,804; Nov. 7; Gaz. vol. 232; p. 88.
Steinmetz, Herman, Rochester, N. Y. Sheet-lifting mechanism. No. 1,203,930; Nov. 7; Gaz. vol. 232; p. 134.
Stephan, Jacob F., New York, N. Y. Game device. No. 1,203,805; Nov. 7; Gaz. vol. 232; p. 88.
Stewart, Arthur L. (See Gleason, Stewart, and Bullock.)
Stewart Elevator Safety Latch Co. (See Stewart, John H., assignor.)
Stewart, John H., Jamaica, assignor to Stewart Elevator Safety Latch Co., Queens county, N. Y. Safety-latch for elevator-doors. No. 1,203,931; Nov. 7; Gaz. vol. 232; p. 134.
Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,204,202; Nov. 7; Gaz. vol. 232; p. 228.
Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,204,326; Nov. 7; Gaz. vol. 232; p. 268
Stimpson, Edward S., assignor to Draper Company, Hopedale, Mass. Shuttle for weft-replenishing looms. No. 1,204,084; Nov. 7; Gaz. vol. 232; p. 188.
Stock, Henry F., Waukesha, Wis. Pasteurizing-machine. No. 1,203,806; Nov. 7; Gaz. vol. 232; p. 89.
Stolz, Harry C., Franklin, Pa. Cylinder for gas-engines. No. 1,203,807; Nov. 7; Gaz. vol. 232; p. 89.
Straight, Bennett D., assignor to Mail-om-eter Company, Detroit, Mich. Stamp-affixing machine. No. 1,203,932; Nov. 7; Gaz. vol. 232; p. 135.
Straight, Halver R., Adel, Iowa. Self-supporting-tile roof. No. 1,203,933; Nov. 7; Gaz. vol. 232; p. 135.
Straight, Halver R., Adel, Iowa. Ventilated building-block. No. 1,203,934; Nov. 7; Gaz. vol. 232; p. 136.
Stringham, Thomas W., Lodi, Cal. Distributer for liquids. No. 1,203,935; Nov. 7; Gaz. vol. 232; p. 136.
Strube, George F., Chicago, Ill. Artificial bait. No. 1,204,204; Nov. 7; Gaz. vol. 232; p. 229.
Strubbar, Valentine, Washington, Ill. Scraper. No. 1,203,936; Nov. 7; Gaz. vol. 232; p. 136.
Stuart, Francis L., Baltimore, Md. Conveying and loading apparatus. No. 1,204,203; Nov. 7; Gaz. vol. 232; p. 228.
Sugden, Edmonds J. (See McKibbin, John B., assignor.)
Sullivan, Maurice, New York, N. Y. Insulation-forming machine. No. 1,203,808; Nov. 7; Gaz. vol. 232; p. 89.
Suren, Nathan H., Needham, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y. Alarm-controlling means for sprinkler systems. No. 1,204,327; Nov. 7; Gaz. vol. 232; p. 269.
Surface, Taylor K., Merna, Nebr. Flag-holder for automobiles. No. 1,203,937; Nov. 7; Gaz. vol. 232; p. 136.
Sutcliffe, Edgar R., Leigh, England. Manufacture of tiles, roof-sheets, and the like. No. 1,204,085; Nov. 7; Gaz. vol. 232; p. 188.
Sutcliffe, Edgar R., Leigh, England. Tiles, roof-sheets, and the like. No. 1,204,086; Nov. 7; Gaz. vol. 232; p. 189.
Sweetland, Ernest J., Montclair, N. J. Pressure-filter. (Reissue.) No. 14,213; Nov. 7; Gaz. vol. 232; p. 291.
Sweets Catalogue Service Inc. (See Annable, George A., assignor.)
Swikard, Edward L., Chicago, Ill. Robe-holder. No. 1,203,809; Nov. 7; Gaz. vol. 232; p. 90.
Synthetic Patents Co. (See Meckbach, Ernst, assignor.)
T. L. Smith Company. (See Brackenbury, Edward W., assignor.)
Taliaferro, Nathan C. (See Rigney, Meakin, assignor.)
Task, Henry, assignor of one-half to J. Laube, Detroit, Mich. Coffee-percolator. No. 1,203,661; Nov. 7; Gaz. vol. 232; p. 38.
Tate, Robert L., assignor of one-half to W. J. Hartley, Atlanta, Ga. Illuminating device for musical instruments. No. 1,204,205; Nov. 7; Gaz. vol. 232; p. 229.
Tatum, Lewis L., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Rheostat. No. 1,203,810; Nov. 7; Gaz. vol. 232; p. 90.
Taylor, Alva R., Vernon, Tex. Automobile-jack. No. 1,203,811; Nov. 7; Gaz. vol. 232; p. 90.
Tendollen, John. (See Liefbroer and Tendollen.)
Terrio, Joseph A., Ogdensburg, Wis. Egg-handling device. No. 1,203,938; Nov. 7; Gaz. vol. 232; p. 137.
Textile Machine Works. (See Rahm and Wilson, assignors.)
Thom, George L. (See Fargo and Thom.)
Thomas, David H. (See Harris, John, assignor.)
Thomas Foreign Patents Limited. (See Thomas, John G. P., assignor.)
Thomas, John G. P., Chiswick, assignor to Thomas Foreign Patents Limited, London, England. Gearing. No. 1,203,662; Nov. 7; Gaz. vol. 232; p. 38.
Thomas, John G. P., Chiswick, assignor to Thomas Foreign Patents Limited, Kensington, London, England. Driving of road-vehicles. No. 1,203,663; Nov. 7; Gaz. vol. 232; p. 39.
Thomas, John G. P., Kensington, assignor to Thomas Foreign Patents Limited, London, England. Driving of road and rail vehicles. No. 1,203,664; Nov. 7; Gaz. vol. 232; p. 39.
Thomas Maddock's Sons Company. (See Kelly, John F., assignor.)
Thomas Maddock's Sons Company. (See Maddock, Harold S., assignor.)
Thomas, Percy H., East Orange, assignor, by mesne assignments, to Cooper-Hewitt Electric Company, Hoboken, N. J. Mercury-vapor apparatus. No. 1,203,812; Nov. 7; Gaz. vol. 232; p. 91.
Thomason, William P., Ellerslie, Ga. Hoe. No. 1,204,206; Nov. 7; Gaz. vol. 232; p. 229.
Thompson, George W., Springfield, Mo. Resilient wheel. No. 1,203,939; Nov. 7; Gaz. vol. 232; p. 137.
Thorp, Lewis W., Springfield, Mo. Vehicle-wheel. No. 1,203,813; Nov. 7; Gaz. vol. 232; p. 91.
Thorne, Robert H., assignor of one-half to J. L. Hough, Williamsport, Pa. Valve. No. 1,204,087; Nov. 7; Gaz. vol. 232; p. 189.
Throne, Robert P., Syracuse, assignor to R. E. Dietz Company, New York, N. Y. Guard for lanterns. No. 1,204,207; Nov. 7; Gaz. vol. 232; p. 229.
Thull, Joseph J., Boyd, Wis. Adjustable set-wrench. No. 1,204,208; Nov. 7; Gaz. vol. 232; p. 229.
Thull, Joseph J., Boyd, Wis. Bolt-keeper. No. 1,204,209; Nov. 7; Gaz. vol. 232; p. 230.
Tims, Elmer W., and J. T. Morie, Youngstown, Ohio. Lever-locking device. No. 1,204,210; Nov. 7; Gaz. vol. 232; p. 230.
Toledo Scale Company, The. (See Hapgood, Clarence H., assignor.)
Tolley, Charles H., Ilion, N. Y. Wave-motor. No. 1,204,088; Nov. 7; Gaz. vol. 232; p. 189.
Tomkinson, Arthur, Grindrod, British Columbia, Canada. Planer-knife-setting gage. No. 1,203,814; Nov. 7; Gaz. vol. 232; p. 91.
Tone, Frank J., assignor to The Carborundum Company, Niagara Falls, N. Y. Silicon-carbid refractory article. No. 1,204,211; Nov. 7; Gaz. vol. 232; p. 230.
Torrison, Aaron J., Manitowoc, Wis. Form for displaying clothing. No. 1,203,815; Nov. 7; Gaz. vol. 232; p. 92.
Torsion Balance Company, The. (See Becker, Christopher A., assignor.)

Tregoning, William C., Cleveland, Ohio, assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill. Electrical connection. No. 1,203,816; Nov. 7; Gaz. vol. 232; p. 92.
Triner, James M., Chicago, Ill. Scale. No. 1,203,817; Nov. 7; Gaz. vol. 232; p. 93.
Trinkl, Sam D., Huntington, Tex. Combined rotatable table, book-shelf, and lamp-support. No. 1,203,818; Nov. 7; Gaz. vol. 232; p. 93.
Trout, William H., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Edging-machine for lumber. No. 1,203,940; Nov. 7; Gaz. vol. 232; p. 137.
Troy Laundry Machinery Company. (See Bartholomew and Allen, assignors.)
Tuckey, Edson N., Syracuse, N. Y. Educational appliance. No. 1,204,089; Nov. 7; Gaz. vol. 232; p. 189.
Tuttle, Henry A., assignor to Evans Stamping & Plating Company, Taunton, Mass. Reversing-gearing. No. 1,204,379; Nov. 7; Gaz. vol. 232; p. 287.
Underwood Computing Machine Company. (See Degener and Saunders, assignors.)
Underwood Computing Machine Company. (See Wright, Walter, assignor.)
Underwood Typewriter Company. (See Cooper, John J., assignor.)
Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)
Underwood Typewriter Company. (See Roberts, Lyman R., assignor.)
Underwood Typewriter Company. See Stickney, Burnham C., assignor.)
Underwood Typewriter Company. (See Sheckler, John H., assignor.)
Underwood Typewriter Company. (See Smith, Stephen T., assignor.)
Union Special Machine Company. (See Eberley, George W., assignor.)
Union Special Machine Company. (See Moffatt, James R., assignor.)
Union Steam Pump Company. (See Smith, Karl D., assignor.)
United Engineering & Foundry Company. (See Biggert, Florence C., Jr., assignor.)
United Roofing & Manufacturing Company. (See Prifold, George, assignor.)
United Shoe Machinery Company. (See Benjamin, John M., assignor.)
United Shoe Machinery Company. (See Enslin, Herbert E., assignor.)
United Shoe Machinery Company. (See Gordon, William, assignor.)
United Shoe Machinery Company. (See McFeely, Ronald F., assignor.)
United States Graphite Company, The. (See Eviston, John W., assignor.)
Universal Winding Company. (See Marcroft, William, assignor.)
Universal Winding Company. (See Ryden, Claes, assignor.)
Urquhart, Alexander F., Sacramento, Cal. Shoe-lace fastener. No. 1,204,212; Nov. 7; Gaz. vol. 232; p. 231.
Van Calcar, Reinder P., Oegstgeest, J. Ellerman and H. J. Martijn, The Hague, Netherlands. Drying and sterilizing air. No. 1,203,941; Nov. 7; Gaz. vol. 232; p. 138.
Van Dorn, William T., Chicago, Ill. Metal wall for railway-cars. No. 1,203,819; Nov. 7; Gaz. vol. 232; p. 93.
Van Horn, William H. (See Kemp and Van Horn.)
Van der Sluys, Matthew, Paterson, N. J. Treadle starting mechanism for machines. No. 1,203,658; Nov. 7; Gaz. vol. 232; p. 37.
Vey, John A., assignor to Continental Rubber Works, Erie, Pa. Tube-wrapping machine. No. 1,204,213; Nov. 7; Gaz. vol. 232; p. 231.
Vickers Limited. (See Smith, Franklin E., assignor.)
Vogel, William, New York, N. Y. Griddle-cake turner. No. 1,203,665; Nov. 7; Gaz. vol. 232; p. 39.
Voleske, John, Portland, Oreg. Power-cutter. No. 1,204,090; Nov. 7; Gaz. vol. 232; p. 189.
Von Madaler, Katharina, West Drayton, England, assignor to Projectophone Company Inc. Apparatus for preparing combined cinematographic and phonographic records. No. 1,204,091; Nov. 7; Gaz. vol. 232; p. 190.
Voorhees, Lee J., Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company. Signal-recorder. No. 1,204,214; Nov. 7; Gaz. vol. 232; p. 231.
Voorhees, Lee J., Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company. Signal-box. No. 1,204,215; Nov. 7; Gaz. **vol. 232; p. 232.**
Voss, Carl, assignor of one-half to M. J. C. Walter, Newark, N. J. Leather rolling and embossing machine. No. 1,204,092; Nov. 7; Gaz. vol. 232; p. 190.
Wagner, John, Long Island City, N. Y. Closure for receptacles. No. 1,204,093; Nov. 7; Gaz. vol. 232; p. 191.
Waits, John M., Eldorado, Ill. Pulley or sheave journal and mount. No. 1,204,094; Nov. 7; Gaz. vol. 232; p. 191.
Waldorf, Fred. (See Hatch and Waldorf.)
Wales, Marie S., assignor of one-fourth to M. Bailey and one-fourth to R. M. Sievers, Oak Creek, Colo. Colander. No. 1,203,820; Nov. 7; Gaz. vol. 232; p. 94.
Walker, Edwin, Erie, Pa. Phonograph. No. 1,203,666; Nov. 7; Gaz. vol. 232; p. 40.
Walker, Edwin, Erie, Pa. Phonograph. No. 1,203,667; Nov. 7; Gaz. vol. 232; p. 40.
Walker, James O., Pensacola, Fla. Sap-cup holder. No. 1,203,942; Nov. 7; Gaz. vol. 232; p. 138.
Walker, James R., assignor to Niagara Alkali Company, Niagara Falls, N. Y. Self-dumping hoist. No. 1,204,216; Nov. 7; Gaz. vol. 232; p. 232.
Wallen, Charles J., Cleveland, Ohio. Ratchet-wrench. No. 1,204,095; Nov. 7; Gaz. vol. 232; p. 191.
Waller, Carl R. (See Waller, Per A., assignor.)
Waller, Per A., Stockholm, Sweden, assignor to C. R. Waller, Trenton, N. J. Metal sheet for acoustic purposes and making same. No. 1,204,096; Nov. 7; Gaz. vol. 232; p. 191.
Walter, Melchior J. C. (See Voss, Carl, assignor.)
Walter, Richard F., New York, N. Y. Vehicle-brake. No. 1,204,097; Nov. 7; Gaz. vol. 232; p. 191.
Wampler, William M., New York, N. Y., and W. L. Conwell, Upper Montclair, N. J., assignors to The Ellcon Company, New York, N. Y. Grab-handle for stanchions. No. 1,203,821; Nov. 7; Gaz. vol. 232; p. 94.
Ward Baking Company. (See Kohman, Godfrey, and Ashe, assignors.)
Ward Bread Company. (See Comstock, Corry B., assignor.)
Ward, William L., H. D. Remsen, and E. C. Boerner, assignors to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y. Nut-making machine. No. 1,203,822; Nov. 7; Gaz. vol. 232; p. 95.
Ward, William L., H. D. Remsen, and E. C. Boerner, assignors to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y. Nut-making machine. No. 1,203,823; Nov. 7; Gaz. vol. 232; p. 95.
Ward, William L., H. D. Remsen, and E. C. Boerner, assignors to Russell, Burdsall & Ward Bolt and Nut Co., Port Chester, N. Y. Nut-making machine. No. 1,203,824; Nov. 7; Gaz. vol. 232; p. 96.
Ware, Elmer G., Bisbee, Ariz. Spark-plug protector and cleaner. No. 1,203,943; Nov. 7; Gaz. vol. 232; p. 138.
Warren, Henry E., Ashland, Mass. Circuit-controlling device. No. 1,203,825; Nov. 7; Gaz. vol. 232; p. 96.
Watson, George R., Portland, Oreg. Photographic duplicating and enlarging apparatus. No. 1,204,098; Nov. 7; Gaz. vol. 232; p. 192.
Watson, George R., Waterloo, Iowa. Well-drilling device. No. 1,204,099; Nov. 7; Gaz. vol. 232; p. 192.
Weaver, John P., Terre Haute, Ind. Reel-holder. No. 1,204,217; Nov. 7; Gaz. vol. 232; p. 233.
Weber, Harry M. (See Ellis and Weber.)
Weber, Josef, Essen-on-the-Ruhr, Germany. Means for heating gases. No. 1,203,944; Nov. 7; Gaz. vol. 232; p. 138.
Wehrle Company, The. (See Pickup, George E., assignor.)
Weins, Arthur, and J. H. P. J. Roesler, Milwaukee, Wis. Machine-guard. No. 1,203,668; Nov. 7; Gaz. vol. 232; p. 41.
Welles, Edward R. (See Kerlin, William L., assignor.)
Wentz, William T., Leon, Kans. Kafir-corn harvester and binder. No. 1,204,328; Nov. 7; Gaz. vol. 232; p. 269.
Werden, Henrietta T., New York, N. Y. Thread-guide for sewing-machines. No. 1,203,945; Nov. 7; Gaz. vol. 232; p. 139.
West Side Foundry Company. (See Hilton, Roland C., assignor.)
Westbury, William, Okmulgee, Okla. Glass-cylinder-capping apparatus. No. 1,203,826; Nov. 7; Gaz. vol. 232; p. 97.
Westenhiser, Oscar F., St. Louis, Mo. Press. No. 1,203,946; Nov. 7; Gaz. vol. 232; p. 139.
Western Electric Company. (See Clark, Edgar H., assignor.)
Western Electric Company. (See Johnson, Lewis H., assignor.)
Western Electric Company. (See Lundell, Alben E., assignor.)
Western Electric Company. (See Reynolds, John N., assignor.)
Western Electric Company. (See Williams, Samuel B., Jr., assignor.)
Western Shade Cloth Company, The. (See Lowe, Arthur R., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hall, Arthur J., assignor.)
Westinghouse Electric and Manufacturing Company. (See Peters, John F., assignor.)
Westlin, Carl T., Arlington, N. J. Endless conveyer-belt. No. 1,203,827; Nov. 7; Gaz. vol. 232; p. 97.
White, Clarence W. and L. R., North Bennington, Vt. Projector. No. 1,204,100; Nov. 7; Gaz. vol. 232; p. 193.
White, Harry P., Albany, Oreg. Combined ironing-board and step-ladder. No. 1,204,218; Nov. 7; Gaz. vol. 232; p. 233.
White, Louis R. (See White, Clarence W. and L. R.)
White Motor Company, The. (See Carpenter, George D., assignor.)
White, Walter C., assignor to International Couplers Company, Los Angeles, Cal. Train-pipe coupling. No. 1,204,219; Nov. 7; Gaz. vol. 232; p. 233.
White, William R., Troy, Ala. Cotton-boll-weevil destroyer. No. 1,204,101; Nov. 7; Gaz. vol. 232; p. 193.
Whitehouse, John N., Newark, N. J. Machine for making seamless celluloid articles. No. 1,203,947; Nov. 7; Gaz. vol. 232; p. 139.

Whiteside, Robert A., Beaver Falls, assignor of one-half to A. M. Neeper, Pittsburgh, Pa. Fastening device. No. 1,203,669; Nov. 7; Gaz. vol. 232; p. 41.
Whitford, Willis, Yawn, Saskatchewan, Canada. Rotary grinding and polishing tool. No. 1,204,102; Nov. 7; Gaz. vol. 232; p. 193.
Whiting, Arthur E., Louisville, Ky. Revolving lawn-rake. No. 1,204,220; Nov. 7; Gaz. vol. 232; p. 234.
Whitlock Printing Press Mfg. Co. (See Huson and Kaddeland, assignors.)
Wick, George C., assignor to P. P. Bilhorn, Chicago, Ill. Organ-bellows. No. 1,204,103; Nov. 7; Gaz. vol. 232; p. 194.
Widdup, William R., Spartanburg, S. C., assignor to Draper Company, Hopedale, Mass. Thread-cutting temple for looms. No. 1,203,828; Nov. 7; Gaz. vol. 232; p. 97.
Wiemer, John, San Jose, Ill. Grain-car door. No. 1,203,948; Nov. 7; Gaz. vol. 232; p. 140.
Wilcox, Ernest C., and J. F. Cavanagh, assignors to The Connecticut Telephone & Electric Company, Meriden, Conn. Ignition mechanism for internal-combustion engines. No. 1,204,104; Nov. 7; Gaz. vol. 232; p. 194.
Wiles, James P. (See Lengquist and Wiles.)
Wiley, Clarence A., Tulsa, Okla. Sand-trap for oil-wells. No. 1,204,105; Nov. 7; Gaz. vol. 232; p. 194.
Wilgus, Charles V. (See Schleicher and Wilgus.)
Wilkins, John E., Kansas City, Mo. Collapsible tent-frame. No. 1,204,329; Nov. 7; Gaz. vol. 232; p. 270.
Williams, Henry D., New York, N. Y. Safety locking device for hatch-doors. No. 1,204,221; Nov. 7; Gaz. vol. 232; p. 234.
Williams, Lacey Y., Toledo, Ohio. Dust-guard. No. 1,203,670; Nov. 7; Gaz. vol. 232; p. 41.
Williams, Louis N. D., Ogontz, Pa. Stitch transferring and doubling device. No. 1,203,949; Nov. 7; Gaz. vol. 232; p. 140.
Williams, Samuel B., Jr., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,203,671; Nov. 7; Gaz. vol. 232; p. 42.
Williams, Samuel B., Jr., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,203,829; Nov. 7; Gaz. vol. 232; p. 97.
Wilson, Charles H., Glens Falls, N. Y. Fruit-pitter. No. 1,203,830; Nov. 7; Gaz. vol. 232; p. 98.
Wilson, Robert H., Tacoma, Wash. Car-fender. No. 1,204,222; Nov. 7; Gaz. vol. 232; p. 234.
Wilson, Thomas V. (See Rahm and Wilson.)
Wilson, William, Newark, N. J. Straw hat. No. 1,203,672; Nov. 7; Gaz. vol. 232; p. 42.
Wing, John J., Yonkers, N. Y. Tender-tank valve. No. 1,204,106; Nov. 7; Gaz. vol. 232; p. 195.
Winkler, Carl, Bern, Switzerland. Production of stereotypic printing-plates. No. 1,204,107; Nov. 7; Gaz. vol. 232; p. 195.
Winston, Charles S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Toll-trunk circuit. No. 1,203,950; Nov. 7; Gaz. vol. 232; p. 140.
Wittliff, Fannie M. (See Wittliff and Parker, assignors.)
Wittliff, Theodore H., and C. W. Parker, Dayton, Ohio., assignors to F. M. Wittliff, Waco, Tex. Lifting-jack. No. 1,203,673; Nov. 7; Gaz. vol. 232; p. 42.
Wittman, John H., Toledo, Ohio. Convertible box and coaster body for vehicles. No. 1,203,831; Nov. 7; Gaz. vol. 232; p. 98.
Wolfe, Clinton L., Brooklyn, N. Y. Resilient wheel. No. 1,203,674; Nov. 7; Gaz. vol. 232; p. 43.
Wood, Frederick P., Detroit, Mich., assignor to American Can Company, New York, N. Y. Coffee-container. No. 1,203,832; Nov. 7; Gaz. vol. 232; p. 98.
Wood, George P., Peekskill, N. Y. Beehive. No. 1,203,675; Nov. 7; Gaz. vol. 232; p. 43.
Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Braking mechanism for presses. No. 1,203,951; Nov. 7; Gaz. vol. 232; p. 141.
Wood Newspaper Machinery Corporation. (See Wood, Henry A. W., assignor.)
Woodard, William E., Schenectady, assignor to American Locomotive Company, New York, N. Y. Tender-tank valve. No. 1,204,108; Nov. 7; Gaz. vol. 232; p. 195.
Woodland, Francis S., *et al.*, administrators. (See Woodland, Frank O.)
Woodland, Frank O., deceased; F. S. Woodland and A. F. Kelley, administrators, assignors to Economic Machinery Company, Worcester, Mass. Automatic bottle-feed mechanism for labeling-machines. No. 1,203,676; Nov. 7; Gaz. vol. 232; p. 44.
Woods, Albert H., New York, N. Y. Columnar bill-board and refuse-container. No. 1,203,952; Nov. 7; Gaz. vol. 232; p. 141.
Woods Motor Vehicle Company. (See Fend, Roland S., assignor.)
Woodward, Willard A., Fairbanks, Wash. Power governor and clutch. No. 1,203,833; Nov. 7; Gaz. vol. 232; p. 98.
Wright, Ira O., Baltimore, Md. Draft-yoke. No. 1,203,834; Nov. 7; Gaz. vol. 232; p. 99.
Wright, Walter, San Francisco, Cal. Type-setting machine. No. 1,203,677; Nov. 7; Gaz. vol. 232; p. 44.
Wright, Walter, New York, N. Y. Type-setting machine. No. 1,203,679; Nov. 7; Gaz. vol. 232; p. 45.
Wright, Walter, New York, N. Y. Type-setting machine. No. 1,203,680; Nov. 7; Gaz. vol. 232; p. 46.
Wright, Walter, New York, N. Y., assignor to Addressograph Company, Chicago, Ill. Printing-machine. No. 1,203,678; Nov. 7; Gaz. vol. 232; p. 45.
Wright, Walter, assignor to Underwood Computing Machine Company, New York, N. Y. Type-writing machine. No. 1,203,953; Nov. 7; Gaz. vol. 232; p. 142.
Wyckoff, Herbert B., Centerville, Iowa. Corn-harvester. No. 1,203,954; Nov. 7; Gaz. vol. 232; p. 142.
Wyles, Albert, Jr., Evesham, England. Self-contained motor-driven agricultural implement. No. 1,204,223; Nov. 7; Gaz. vol. 232; p. 235.
Wyles, Albert, Jr., Leeds, England. Agricultural implement. No. 1,204,224; Nov. 7; Gaz. vol. 232; p. 235.
Wyles, Albert, Jr., Leeds, England. Self-propelled agricultural implement. No. 1,204,225; Nov. 7; Gaz. vol. 232; p. 236.
Wyles, Albert, Jr., Manchester, England. Self-propelled agricultural implement. No. 1,204,226; Nov. 7; Gaz. vol. 232; p. 236.
Yale & Towne Manufacturing Company, The. (See Lewis, Rollin C., assignor.)
Young, May E., New Milford, Conn. Fastening device. No. 1,204,227; Nov. 7; Gaz. vol. 232; p. 236.
Zabel, Max W., trustee. (See Borresen, Helge A., assignor.)
Zahm, Edward, assignor to Zahm Manufacturing Company, Buffalo, N. Y. Filter. No. 1,203,835; Nov. 7; Gaz. vol. 232; p. 99.
Zahm Manufacturing Company. (See Zahm, Edward, assignor.)
Zanders, Louis H., Malvern, Iowa. Gate-latch. No. 1,204,228; Nov. 7; Gaz. vol. 232; p. 237.
Zarth, Otto, assignor of one-half to W. H. McCullouch, Aurora, Ill. Replaceable-tread vehicle-tire. No. 1,204,109; Nov. 7; Gaz. vol. 232; p. 195.
Zollinger, Ernest, and S. Mischonsniky, Turin, Italy. Motion-picture color-filter. No. 1,203,681; Nov. 7; Gaz. vol. 232; p. 46.
Zwicky, Jakob, Langgass, St. Gall, Switzerland. Telescope-telemeter. No. 1,204,229; Nov. 7; Gaz. vol. 232; p. 237.
Zwicky, Jean, South Tottenham, England. Pump, engine, and the like. No. 1,203,682; Nov. 7; Gaz. vol. 232; p. 46.

DESIGNS.

Abrams, William, assignor to The Meyercord Company, Chicago, Ill. Plate or similar article. No. 49,841; Nov. 7; Gaz. vol. 232; p. 292.
Caldwell & Co., J. E. (See Sickels, William H., assignor.)
Chace, William W., New York, N. Y. Netted fabric. No. 49,842; Nov. 7; Gaz. vol. 232; p. 292.
Chase, Ambrose P., West Somerville, Mass. Game apparatus. No. 49,843; Nov. 7; Gaz. vol. 232; p. 292.
German-American Button Company. (See Monaghan, John S., assignor.)
German-American Button Company. (See Siebert, Rudolph, assignor.)
Gorham Manufacturing Company. (See Jenks, Barton P., assignor.)
Gorham Manufacturing Company. (See Staf, Axel H., assignor.)
Jenks, Barton P., assignor to Gorham Manufacturing Company, Providence, R. I. Handle for spoons, forks, or similar articles. No. 49,844; Nov. 7; Gaz. vol. 232; p. 292.
Jenks, Barton P., assignor to Gorham Manufacturing Company, Providence, R. I. Liquid-server or similar article. No. 49,845; Nov. 7; Gaz. vol. 232; p. 293.
Kimpton, Haupt & Co. (See Riley, James T., assignor.)
Klein, Louis, Des Moines, Iowa. Picture-frame. No. 49,846; Nov. 7; Gaz. vol. 232; p. 293.
McKoy, William J., San Antonio, Tex. Puzzle-box. No. 49,847; Nov. 7; Gaz. vol. 232; p. 293.
Meyercord Company, The. (See Abrams, William, assignor.)
Monaghan, John S., assignor to German-American Button Company, Rochester, N. Y. Button. Nos. 49,848–50; Nov. 7; Gaz. vol. 232; pp. 293–4.
Mueller, Curt B., Lakewood, Ohio. Automobile-body. No. 49,851; Nov. 7; Gaz. vol. 232; p. 294.
New York Gas & Electric Appliance Company. (See Schwartzman, Benjamin, assignor.)
Northwood, Harry, Wheeling, W. Va. Tube-receiving pedestal for flower-stands. No. 49,852; Nov. 7; Gaz. vol. 232; p. 294.
Riley, James T., Brooklyn, assignor to Kimpton, Haupt & Co., New York, N. Y. Inkstand. Nos. 49,853–7; Nov. 7; Gaz. vol. 232; pp. 294–5.
Schwartzman, Benjamin, assignor to New York Gas & Electric Appliance Company, New York, N. Y. Arm for lighting-fixtures. No. 49,858; Nov. 7; Gaz. vol. 232; p. 295.
Schwartzman, Benjamin, assignor to New York Gas & Electric Appliance Company, New York, N. Y. Bowl-hanger and outside-light support. No. 49,859; Nov. 7; Gaz. vol. 232; p. 295.
Schwartzman, Benjamin, assignor to New York Gas & Electric Appliance Company, New York, N. Y. Ornament for lighting-fixtures. No. 49,860; Nov. 7; Gaz. vol. 232; p. 296.
Schwartzman, Benjamin, assignor to New York Gas & Electric Appliance Company, New York, N. Y. Bowl-hanger for lighting-fixtures. No. 49,861; Nov. 7; Gaz. vol. 232; p. 296.
Schwartzman, Benjamin, assignor to New York Gas & Electric Appliance Company, New York, N. Y. Arm for lighting-fixtures. No. 49,862; Nov. 7; Gaz. vol. 232; p. 296.
Seaman, Charles W., Newburgh, N. Y. Tongs. No. 49,863; Nov. 7; Gaz. vol. 232; p. 296.
Sheffler, Ira L., Detroit, Mich. Vacuum-cleaner case. No. 49,864; Nov. 7; Gaz. vol. 232; p. 296.
Sickels, William H., Newtown Square, assignor to J. E. Caldwell & Co., Philadelphia, Pa. Badge or insignia. No. 49,865; Nov. 7; Gaz. vol. 232; p. 296.
Siebert, Rudolph, assignor to German-American Button Company, Rochester, N. Y. Button. Nos. 49,866–7; Nov. 7; Gaz. vol. 232; p. 297.
Staf, Axel H., assignor to Gorham Manufacturing Company, Providence, R. I. Handle for spoons, forks, or similar articles. No. 49,868; Nov. 7; Gaz. vol. 232; p. 297.
Wearne, Harry, New York, N. Y. Printed fabric. Nos. 49,869–73; Nov. 7; Gaz. vol. 232; pp. 297–8.

TRADE-MARKS.

A. J. Reach Company, Philadelphia, Pa. Base-ball gloves. No. 113,909; Nov. 7; Gaz. vol. 232; p. 316.
Abformator Support Co., Inc., The, Watertown, N. Y. Body-brace. No. 113,851; Nov. 7; Gaz. vol. 232; p. 315.
Agasote Millboard Co., The, Trenton, N. J., and New York, N. Y. Homogeneous waterproof and fire-resisting wood substitutes made from pulp. No. 113,852; Nov. 7; Gaz. vol. 232; p. 315.
Alexander Drug Co., Oklahoma, Okla. Ointment for relief of skin eruption. No. 113,853; Nov. 7; Gaz. vol. 232; p. 315.
American Ingenuities Corporation, Brooklyn, N. Y. Edible containers for creams, ice-creams, liquid and semiliquid foods and confections. No. 113,854; Nov. 7; Gaz. vol. 232; p. 315.
Aston Motor Accessories Co. Ld., Birmingham, England. Carbureters and parts thereof for internal-combustion engines. No. 113,856; Nov. 7; Gaz. vol. 232; p. 315.
Bishop, James S., Glenmora, La. Liniment. No. 113,857; Nov. 7; Gaz. vol. 232; p. 315.
Bourjois & Co., Inc., A., New York, N. Y. Toilet powder. No. 113,858; Nov. 7; Gaz. vol. 232; p. 315.
Braden Manufacturing Company, Terre Haute, Ind. Sheet-metal roofing. No. 113,859; Nov. 7; Gaz. vol. 232; p. 315.
Burd, Lemuel, New York, N. Y. Face-cream. No. 113,860; Nov. 7; Gaz. vol. 232; p. 315.
California Central Creameries, San Francisco, Cal. Butter, cheese, sweet cream, dry, whole, skim, and butter milks, eggs. No. 113,861; Nov. 7; Gaz. vol. 232; p. 315.
Campbell, Metzger & Jacobson, New York, N. Y. Fancy materials for hand-embroidery work. No. 113,862; Nov. 7; Gaz. vol. 232; p. 315.
Cape Girardeau Portland Cement Co., Cape Girardeau, Mo. Portland cement for structural purposes. No. 113,863; Nov. 7; Gaz. vol. 232; p. 315.
Celro-Kola Company, Portland, Oreg. Syrup for soda-water. No. 113,864; Nov. 7; Gaz. vol. 232; p. 315.
City Music Company, Detroit, Mich. Furniture-polish. No. 113,865; Nov. 7; Gaz. vol. 232; p. 315.
Commonwealth Shoe and Leather Company, The, Portland, Me., and Boston, Mass. Leather boots and shoes. No. 113,867; Nov. 7; Gaz. vol. 232; p. 315.
Crystal Percolator Co. Inc., New York, N. Y. Meat, fruit, and vegetable slicers. No. 113,868; Nov. 7; Gaz. vol. 232; p. 315.
Darwin & Milner, Inc., New York, N. Y. Certain named cutlery and tools. No. 113,869; Nov. 7; Gaz. vol. 232; p. 315.
De Grauw, Aymar & Company, New York, N. Y. Oars. No. 113,870; Nov. 7; Gaz. vol. 232; p. 315.
Donnelly, Charles J., Chicago, Ill. Grape-flavored beverages and syrups for making same. No. 113,871; Nov. 7; Gaz. vol. 232; p. 315.
Dow, Fred F., Los Angeles, Cal. Pharmaceutical preparations for rheumatism, lumbago, and sciatica. No. 113,872; Nov. 7; Gaz. vol. 232; p. 315.
E. M. Co., Cincinnati, Ohio. Medicine for stomach, liver, kidneys, bowels, and purification of the blood. No. 113,876; Nov. 7; Gaz. vol. 232; p. 315.
Eatonic Remedy Co., Chicago, Ill. Medicinal tablet for stomach ailments. Nos. 113,873–4; Nov. 7; Gaz. vol. 232; p. 315.
Edwards Laboratories Company, Cleveland, Ohio. Medicinal preparations for rheumatic pains, headaches, and colds. No. 113,875; Nov. 7; Gaz. vol. 232; p. 315.
Eman Manufacturing Company, The, Denver, Colo. Medicinal water used where antiseptic or disinfecting agent is required. No. 113,877; Nov. 7; Gaz. vol. 232; p. 315.
Empire Chemical Company, Dallas, Tex. Mulsified and saponified cocoanut-oil. No. 113,878; Nov. 7; Gaz. vol. 232; p. 315.
Fuhrmann, Albert W., Chicago, Ill. Eye lotion or wash. No. 113,879; Nov. 7; Gaz. vol. 232; p. 316.
Geo. H. Lee Company, Omaha, Nebr. Strengthening application for eggs during incubation. No. 113,890; Nov. 7; Gaz. vol. 232; p. 316.
Gerber & Co., Thoune, Switzerland. Cheese. No. 113,880; Nov. 7; Gaz. vol. 232; p. 316.
Glick, Henry J., Cumberland, Md. Medicine for treatment of the effects of inebriety. No. 113,882; Nov. 7; Gaz. vol. 232; p. 316.
Himmelberger-Harrison Lumber Co., Cape Girardeau, Mo. Gum headings for barrels and casks. No. 113,881; Nov. 7; Gaz. vol. 232; p. 316.
Holihan, J. H., Bismarck, N. D. Medical preparation in the nature of a tonic for treating the tobacco habit. No. 113,883; Nov. 7; Gaz. vol. 232; p. 316.
Hopkins & Son, Ferd. T., New York, N. Y. Certain named pharmaceutical preparations for toilet purposes. No. 113,884; Nov. 7; Gaz. vol. 232; p. 316.

TRADE-MARKS—Continued.

Hunt, Dennis H., Johnson City, Tenn. Medicinal preparation, a tonic and blood-purifier. No. 113,885; Nov. 7; Gaz. vol. 232; p. 316.

Imperial Rubber Co., New York, N. Y. Certain named belting, hose, and machinery packing. No. 113,886; Nov. 7; Gaz. vol. 232; p. 316.

James B. Clow & Sons, Chicago, Ill. Catalogues, price-lists, and other publications. No. 113,866; Nov. 7; Gaz. vol. 232; p. 315.

Johnson, Ida E., Peru, Ind. Preparation for the treatment of hog-cholera. No. 113,887; Nov. 7; Gaz. vol. 232; p. 316.

Kerros, George A., Chicago, Ill. Certain named pharmaceutical preparations. No. 113,888; Nov. 7; Gaz. vol. 232; p. 316.

Landers, Frary & Clark, New Britain, Conn. Certain named measuring and scientific appliances. No. 113,889; Nov. 7; Gaz. vol. 232; p. 316.

Lehigh Paper Mills, Inc., New York, N. Y. Diapers. No. 113,891; Nov. 7; Gaz. vol. 232; p. 316.

Levy, Maurice, New York, N. Y. Powder-puffs. Nos. 113,892–3; Nov. 7; Gaz. vol. 232; p. 316.

Matthews & Lively Co., Atlanta, Ga. Massage-cream to soften and whiten the skin. No. 113,894; Nov. 7; Gaz. vol. 232; p. 316.

Migel, Julius A., New York, N. Y. Broad silks in the piece. No. 113,895; Nov. 7; Gaz. vol. 232; p. 316.

Miller Rubber Company, Akron, Ohio. Toy balloons. No. 113,896; Nov. 7; Gaz. vol. 232; p. 316.

National X-Ray Reflector Company, Chicago, Ill. Certain named electric illuminating apparatus. No. 113,897; Nov. 7; Gaz. vol. 232; p. 316.

National X-Ray Reflector Company, Chicago, Ill. Porcelain reflectors for lighting-fixtures. No. 113,898; Nov. 7; Gaz. vol. 232; p. 316.

Newark Ohio Furniture Co., The, Newark, Ohio. Certain named dining-room furniture. No. 113,899; Nov. 7; Gaz. vol. 232; p. 316.

North American Brewing Company, New York and Brooklyn, N. Y. Beer. No. 113,900; Nov. 7; Gaz. vol. 232; p. 316.

North American Smelting Co. Inc., Philadelphia, Pa. Certain formula of solder known as brazing and spelter solder and brazing-spelter. No. 113,901; Nov. 7; Gaz. vol. 232; p. 316.

Orange Crush Co., Chicago, Ill. Carbonated non-alcoholic beverage and syrups for making same. No. 113,902; Nov. 7; Gaz. vol. 232; p. 316.

Owensboro Ditcher & Grader Co., Owensboro, Ky. Ditchers and graders. No. 113,903; Nov. 7; Gaz. vol. 232; p. 316.

Park, James D., Duluth, Minn. Ointments, tonic, and antiseptic solutions for diseases of and injuries to the skin. No. 113,904; Nov. 7; Gaz. vol. 232; p. 316.

Parsons Paper Company, Holyoke, Mass. Writing and printing paper. No. 113,905; Nov. 7; Gaz. vol. 232; p. 316.

Patton Paint Company, Milwaukee, Wis. Liquid chemical preparation for use as a hardener of cement surfaces. No. 113,906; Nov. 7; Gaz. vol. 232; p. 316.

Pilsener Brewing Company, The, Cleveland, Ohio. Beverages made of malt, hops, and other ingredients. No. 113,908; Nov. 7; Gaz. vol. 232; p. 316.

Robert Reis & Co., New York, N. Y. Certain named wearing-apparel and furnishings for men, women, and children. No. 113,910; Nov. 7; Gaz. vol. 232; p. 316.

Robinson, Mary A., Detroit, Mich. Facial lotion. No. 113,911; Nov. 7; Gaz. vol. 232; p. 317.

Romano, Anthony, Troy and Buffalo, N. Y. Rheumatism remedy. No. 113,912; Nov. 7; Gaz. vol. 232; p. 317.

Royal Remedies Company, Waukegan, Ill. Pharmaceutical preparation for eczematous and allied skin afflictions. No. 113,913; Nov. 7; Gaz. vol. 232; p. 317.

Rubber Products Company, The, Barberton, Ohio. Seamless fountain-syringes and water-bottles. No. 113,914; Nov. 7; Gaz. vol. 232; p. 317.

S. Pfeiffer Manufacturing Company, St. Louis, Mo. Medicinal preparation for diseases and disorders of certain organs and analogous ailments. No. 113,907; Nov. 7; Gaz. vol. 232; p. 316.

Salter, John A., Vicksburg, Miss. Pills for biliousness, torpid liver, constipation, &c. No. 113,915; Nov. 7; Gaz. vol. 232; p. 317.

Scheffer & Rossum Company, St. Paul, Minn. Horse-collars, harness, and riding-saddles. No. 113,916; Nov. 7; Gaz. vol. 232; p. 317.

Schmachtenberg Bros., Inc., New York, N. Y. Pen and pocket knives. No. 113,917; Nov. 7; Gaz. vol. 232; p. 317.

Schmachtenberg Bros., Inc., New York, N. Y. Pocket-knives and scissors. No. 113,918; Nov. 7; Gaz. vol. 232; p. 317.

Society of Chemical Industry in Basle, Basel, Switzerland. Pharmaceutical product. No. 113,919; Nov. 7; Gaz. vol. 232; p. 317.

Southern Bedding Manufacturing Co., Austin, Tex. Mattresses. No. 113,920; Nov. 7; Gaz. vol. 232; p. 317.

Star Products Co., Chicago, Ill. Ready-mixed paint. No. 113,921; Nov. 7; Gaz. vol. 232; p. 317.

Swartley, Harry M., Charleston, S. C. Eczema remedies. No. 113,922; Nov. 7; Gaz. vol. 232; p. 317.

Sweet, Ralph A., Binghamton, N. Y. Toilet creams. No. 113,923; Nov. 7; Gaz. vol. 232; p. 317.

Tillmann & Bendel, San Francisco, Cal. Roasted coffee. No. 113,924; Nov. 7; Gaz. vol. 232; p. 317.

Troll, Frederick J., Baltimore, Md. Load-indicating mechanisms for vehicles. No. 113,925; Nov. 7; Gaz. vol. 232; p. 317.

Vant Woud Rubber Co., The, Brooklyn, N. Y. Nursing-nipples. No. 113,926; Nov. 7; Gaz. vol. 232; p. 317.

Vital Remedies Company, Houston, Tex. Mineral fluid tonic. No. 113,927; Nov. 7; Gaz. vol. 232; p. 317.

Wadsworth, Chester J., Painesville, Ohio. Certain named furniture. No. 113,928; Nov. 7; Gaz. vol. 232; p. 317.

Willowcraft Shops, The, Cambridge, Mass. Certain named furniture. No. 113,929; Nov. 7; Gaz. vol. 232; p. 317.

Womack Bros., Fort Worth, Tex. Whisky. No. 113,930; Nov. 7; Gaz. vol. 232; p. 317.

LABELS.

Argyle Co., The, New York, N. Y. "Uncle Sam." (For Union-Suits.) No. 19,718; Nov. 7; Gaz. vol. 232; p. 318.

Asch, Leonard C., New York, N. Y. "Annette Kellermann Chill-Off Beach Cape." (For Bathing-Capes.) No. 19,719; Nov. 7; Gaz. vol. 232; p. 318.

Beech-Nut Packing Company, Canajoharie, N. Y. "Beech-Nut Brand Mints." (For Candies and Confections.) No. 19,720; Nov. 7; Gaz. vol. 232; p. 318.

Beech-Nut Packing Company, Canajoharie, N. Y. "Beech-Nut Brand Wintergreens." (For Wintergreen-Flavored Candies and Confections.) No. 19,721; Nov. 7; Gaz. vol. 232; p. 318.

Beech-Nut Packing Company, Canajoharie, N. Y. "Beech-Nut Brand Chewing Gum." (For Chewing-Gum.) Nos. 19,722–3; Nov. 7; Gaz. vol. 232; p. 318.

C. B. Henschel Mfg. Co., Milwaukee, Wis. "Dolora." (For Cigars.) No. 19,729; Nov. 7; Gaz. vol. 232; p. 318.

Fischer & Co., B., New York, N. Y. "Coffee." (For Coffee.) No. 19,725; Nov. 7; Gaz. vol. 232; p. 318.

Geo. Haas & Sons, San Francisco, Cal. "Tafimalts." (For Candy.) No. 19,727; Nov. 7; Gaz. vol. 232; p. 318.

Greene, Bertha, Sheepshead Bay, N. Y. "Excellent Hair Grower." (For a Hair-Grower.) No. 19,726; Nov. 7; Gaz. vol. 232; p. 318.

Grunbaum, Adolf, New York, N. Y. "A G." (For Goldwasser.) No. 19,724; Nov. 7; Gaz. vol. 232; p. 318.

Hannah & Lay Company, Traverse City, Mich. "Turkey Red." (For Hard-Wheat Flour.) No. 19,728; Nov. 7; Gaz. vol. 232; p. 318.

Josselson Bros., Catlettsburg, Ky. "88 Special." (For Whisky.) No. 19,730; Nov. 7; Gaz. vol. 232; p. 318.

Koenig Candy Company, Seattle, Wash. "Great Big Baked Potato." (For Packages of Candy.) No. 19,731; Nov. 7; Gaz. vol. 232; p. 318.

McQuay-Norris Mfg. Co., St. Louis, Mo. "McQuay-Norris Leak-Proof Piston Rings." (For Piston-Rings.) No. 19,732; Nov. 7; Gaz. vol. 232; p. 318.

Pitchford Chemical Laboratories, The, Tacoma, Wash. "Gasald." (For a Substance to be Mixed with Gasolene.) No. 19,733; Nov. 7; Gaz. vol. 232; p. 318.

Wetzel, Paul, New Rochelle, N. Y. "The Wonder Corn Shield." (For Corn-Shields.) No. 19,734; Nov. 7; Gaz. vol. 232; p. 318.

PRINTS.

Alexander Sheppard & Sons, Inc., Philadelphia, Pa. "Have You Had Your Morning Sip?" (For Coffee.) No. 4,550; Nov. 7; Gaz. vol. 232; p. 318.

Carnation Milk Products Company, Seattle, Wash. "Make delicious ice cream and frozen dainties with Carnation Milk." (For Milk.) No. 4,546; Nov. 7; Gaz. vol. 232; p. 318.

Cream of Wheat Co., Minneapolis, Minn. "Ah've always said, and now repeat—Ma health am due to Cream O'Wheat." (For Wheat Breakfast Food.) No. 4,547; Nov. 7; Gaz. vol. 232; p. 318.

Indian Refining Company, Augusta, Me., and New York, N. Y. "It Makes a Difference." (For Oil.) No. 4,549; Nov. 7; Gaz. vol. 232; p. 318.

J. P. Gordon Company, The, Columbus, Ohio. "Gordon Convertible Winter and Summer Top, Gordon Seat Coverings, Gordon Tire Covers, Gordon Radiator and Engine Robe." (For Gordon Convertible Winter and Summer Tops, Gordon Seat-Coverings, Gordon Tire-Covers, and Gordon Radiator and Engine Robes.) No. 4,548; Nov. 7; Gaz. vol. 232; p. 318.

Smith, Joe H., Upper Sandusky, Ohio. "Gold Nuggets." (For Popcorn Confections.) No. 4,551; Nov. 7; Gaz. vol. 232; p. 318.

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

A. Burdsal Co., Indianapolis, Ind. Paste and liquid paints, wood and varnish stains, varnishes, &c. No. 96,776; Nov. 7; Gaz. vol. 232; p. 304.

Air Utilities Company, Inc., New York, N. Y. Vegetables, fruits, malts, coffees, teas, &c. No. 93,290; Nov. 7; Gaz. vol. 232; p. 301.

Allen, Joseph C., Plainfield, N. J. Toilet preparations. No. 94,270; Nov. 7; Gaz. vol. 232; p. 302.

American Agricultural Chemical Company, New York, N. Y. Fertilizers. No. 97,888; Nov. 7; Gaz. vol. 232; p. 309.

American Can Co., New York, N. Y. Oyster-display cases. No. 88,797; Nov. 7; Gaz. vol. 232; p. 299.

American Candy Co., Milwaukee, Wis. Chocolates and candy goods of various kinds. No. 97,967; Nov. 7; Gaz. vol. 232; p. 310.

American Cotton Oil Company, Guttenberg, N. J., and New York, N. Y. Cotton-seed oil for screw-cutting and all other lubricating purposes. No. 98,200; Nov. 7; Gaz. vol. 232; p. 312.

American Manufacturing Company, Boston, Mass., and New York, N. Y. Oakum for packing and calking. No. 95,840; Nov. 7; Gaz. vol. 232; p. 303.

Amsden, Effa B., Minneapolis, Minn. Petticoats, union-suits, corset-covers, drawers, &c. No. 97,831; Nov. 7; Gaz. vol. 232; p. 308.

Armand Company, Des Moines, Iowa. Face-powder, cold-cream, hair-wash, rouge, &c. No. 97,570; Nov. 7; Gaz. vol. 232; p. 307.

Armour and Company, Chicago, Ill. Bacon and hams. No. 96,944; Nov. 7; Gaz. vol. 232; p. 305.

Atkinson, W. M., Minneapolis, Minn. Wheat-flour. No. 97,778; Nov. 7; Gaz. vol. 232; p. 308.

Atlantic Insulated Wire & Cable Company, Jersey City, N. J., and Stamford, Conn. Insulated wire. No. 93,733; Nov. 7; Gaz. vol. 232; p. 301.

Austin, Nichols & Co., Inc., Brooklyn and New York, N. Y. Grape-juice and apple nectar. No. 98,070; Nov. 7; Gaz. vol. 232; p. 311.

Auto-Kamp Equipment Co. Inc., Saginaw, Mich. Automobile-trailers. No. 98,152; Nov. 7; Gaz. vol. 232; p. 312.

B. A. Eckhart Milling Co., Chicago, Ill. Wheat-flour. No. 97,900; Nov. 7; Gaz. vol. 232; p. 309.

Baltimore Bargain House, Baltimore, Md. Talking-machines. No. 98,110; Nov. 7; Gaz. vol. 232; p. 311.

Bargar Mfg. Co., Columbus, Ohio. Chemical fire-extinguishers. No. 98,132; Nov. 7; Gaz. vol. 232; p. 312.

Barron, John P., Butte, Mont. Furniture, piano, and automobile polish and varnish-renewer. Nl. 95,743; Nov. 7; Gaz. vol. 232; p. 303.

Bartlett Springs Co., San Francisco, Cal. Natural and carbonated mineral water and non-alcoholic carbonated tonic beverages to be sold as soft drinks. No. 97,386; Nov. 7; Gaz. vol. 232; p. 306.

Bass, Shepard C., Fort Myers, Fla. Citrus fruits. No. 91,285; Nov. 7; Gaz. vol. 232; p. 300.

Bender Co., J. S., New York, N. Y. Hair-nets. No. 96,885; Nov. 7; Gaz. vol. 232; p. 304.

Berg Company, Philadelphia, Pa. Fertilizers. No. 97,431; Nov. 7; Gaz. vol. 232; p. 306.

Bernstein, Baum, Cravis & Company, Philadelphia, Pa. Ladies' skirts, suits, coats. No. 92,431; Nov. 7; Gaz. vol. 232; p. 300.

Britton, Stephen, New York, N. Y. Medicinal preparation used as a tonic and nerve-sedative. No. 98,005; Nov. 7; Gaz. vol. 232; p. 310.

Brodsky Palman Gelber Co., Chicago, Ill. Canned foods, preserves, tomato catsup, flavoring extracts. No. 97,492; Nov. 7; Gaz. vol. 232; p. 307.

Canadian Mill & Elevator Co., El Reno, Okla. Poultry feed. No. 97,207; Nov. 7; Gaz. vol. 232; p. 305.

Chase Bag Co., St. Louis, Mo. Bags. No. 97,894; Nov. 7; Gaz. vol. 232; p. 309.

Columbia River Packers Association, Astoria, Oreg. Canned salmon. Nos. 98,022–4; Nov. 7; Gaz. vol. 232; pp. 310–11.

Corega Chemical Company, Augusta, Me., and Cleveland, Ohio. Dental powder for assisting in holding dental plates in the mouth. No. 80,781; Nov. 7; Gaz. vol. 232; p. 299.

D. & L. Slade Co., Boston, Mass. Flavoring extracts for foods, spices. No. 97,284; Nov. 7; Gaz. vol. 232; p. 306.

Darling & Company, Chicago, Ill. Prepared stock and poultry foods. No. 92,465; Nov. 7; Gaz. vol. 232; p. 301.

Eaton, Crane & Pike Company, Pittsfield, Mass. Writing and printing paper, envelops, tablets, writing-cards, cardboard. No. 98,006; Nov. 7; Gaz. vol. 232; p. 310.

Eby, Edwin S., Lewistown, Pa. Non-alcoholic beverage to be sold as a soft drink. No. 98,162; Nov. 7; Gaz. vol. 232; p. 312.

Edson Moore & Company, Detroit, Mich. Work and negligée shirts, undershirts, overalls, jumpers, rompers. No. 97,407; Nov. 7; Gaz. vol. 232; p. 306.

Elder Manufacturing Company, St. Louis, Mo. Negligée, work, and under shirts. No. 97,622; Nov. 7; Gaz. vol. 232; p. 307.

Euclid Stone & Brick Co., Cleveland, Ohio. Enamel-coated natural stone. No. 98,322; Nov. 7; Gaz. vol. 232; p. 313.

F. A. Hardy & Company, Chicago, Ill. Eyeglasses, lenses for optical and scientific uses, goggles, &c. No. 95,548; Nov. 7; Gaz. vol. 232; p. 303.

F. M. Hoyt Shoe Company, Manchester, N. H. Leather boots and shoes. No. 98,166; Nov. 7; Gaz. vol. 232; p. 312.

Faunce and Spinney Inc., Lynn, Mass. Women's, misses', and children's boots, shoes, and slippers of leather and leather and cloth. No. 98,206; Nov. 7; Gaz. vol. 232; p. 312.

Fiberite Heel and Leather Co. Inc., Whitman, Mass. Composition heels, heel-lifts, and soles. No. 97,624; Nov. 7; Gaz. vol. 232; p. 308.

Flinker, Leon A., Detroit, Mich. Razor-strops. No. 96,954; Nov. 7; Gaz. vol. 232; p. 305.

Foley Bros. & Quinlan, Incorporated, St. Paul, Minn. Coffee. No. 95,964; Nov. 7; Gaz. vol. 232; p. 303.

Frederick & Nelson, Seattle, Wash. Trunks. No. 98,241; Nov. 7; Gaz. vol. 232; p. 313.

Galena-Signal Oil Company, Franklin, Pa. Illuminating and lubricating oils and greases. No. 97,972; Nov. 7; Gaz. vol. 232; p. 310.

General Aluminum & Brass Manufacturing Company, Detroit, Mich. Bearings and bushings. No. 97,639; Nov. 7; Gaz. vol. 232; p. 308.

General Tire and Rubber Company, Akron, Ohio. Rubber tires or tire-casings of rubber with suitable strengthening material and inner tubes for pneumatic tires. No. 94,741; Nov. 7; Gaz. vol. 232; p. 302.

Geo. Borgfeldt & Co., New York, N. Y. Pencil-sharpeners, writing, &c., paper, envelops, writing-pads, &c. No. 92,798; Nov. 7; Gaz. vol. 232; p. 301.

Geo. E. Keith Company, Brockton, Mass. Boots and shoes of leather, rubber, felt, or other fabric. No. 88,742; Nov. 7; Gaz. vol. 232; p. 299.

Glazebrook, Francis H., Morristown, N. J. Remedy for intestinal stasis and constipation. No. 97,683; Nov. 7; Gaz. vol. 232; p. 308.

Gledhill, Charles F., New York, N. Y. Chemicals and pigments for general use. No. 92,975; Nov. 7; Gaz. vol. 232; p. 301.

Greenfield Tap and Die Corporation, Greenfield, Mass. Gages and micrometers. No. 93,792; Nov. 7; Gaz. vol. 232; p. 302.

Haller, Claressa J., New York, N. Y. Preparation or dressing for the hair. No. 94,706; Nov. 7; Gaz. vol. 232; p. 302.

Hess Brothers, Allentown, Pa. Shoes, hosiery, underwear, aprons, blouses, &c. No. 89,461; Nov. 7; Gaz. vol. 232; p. 299.

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Infants Specialty Company Incorporated, Buffalo, N. Y. Nursing-bottles. No. 97,907; Nov. 7; Gaz. vol. 232; p. 309.

Italian Bed Spread Co., New York, N. Y. Cotton bed-spreads. No. 98,018; Nov. 7; Gaz. vol. 232; p. 313.

J. A. Finn & Company, New York, N. Y. Cotton piece goods. No. 97,623; Nov. 7; Gaz. vol. 232; p. 307.

Jelke, Ferdinand F., Boston, Mass. Margarin. No. 97,839; Nov. 7; Gaz. vol. 232; p. 308.

Johnson Bros., Greenspring, Ohio. Mineral water. No. 97,975; Nov. 7; Gaz. vol. 232; p. 310.

Kalo-Kain Chemical Co., Detroit, Mich. Ampuls. No. 98,294; Nov. 7; Gaz. vol. 232; p. 313.

Kirkland Distributing Company, Columbia, S. C. Wheat-flour. No. 97,578; Nov. 7; Gaz. vol. 232; p. 307.

Klein, Benjamin F., Cleveland, Ohio. Gas and combination lighting-fixtures and parts for same. No. 90,514; Nov. 7; Gaz. vol. 232; p. 300.

Korssell, Claus F. P., Chicago, Ill. Non-alcoholic beverages put up in bottles, kegs, and barrels. No. 98,212; Nov. 7; Gaz. vol. 232; p. 312.

Landauer, Jerome R., Chicago, Ill. Gasolene-improvers or preparations for augmenting the energy of motor-fuels. No. 86,087; Nov. 7; Gaz. vol. 232; p. 299.

Lax & Burgheimer, Inc., New York, N. Y. Knitted underwear in one and two piece garments. No. 96,716; Nov. 7; Gaz. vol. 232; p. 304.

Lee Broom & Duster Company, Lincoln, Nebr. Brooms. Nos. 97,218–20; Nov. 7; Gaz. vol. 232; pp. 305–6.

Levy, Sarah, New York, N. Y. Dandruff remedy and hair-restorer. No. 97,997; Nov. 7; Gaz. vol. 232; p. 310.

Lipps, Morris, New York, N. Y. Beds, mattresses, bed-springs. No. 89,548; Nov. 7; Gaz. vol. 232; p. 300.

Lloyds of America, Bradley Beach, N. J. Preparation to be applied to coal to render the combustion more complete. No. 97,953; Nov. 7; Gaz. vol. 232; p. 309.

Los Angeles Foundry Company, Los Angeles, Cal. Balls for ball and tube mills. No. 97,799; Nov. 7; Gaz. vol. 232; p. 308.

Luckett, Philip A., Salisbury, Md. Union-suits, undershirts, drawers, and pajamas of textile material. No. 93,801; Nov 7; Gaz. vol. 232; p. 302.

Lyon, Conklin & Co. Inc., Baltimore, Md. Terne plates, No. 98,387; Nov. 7; Gaz. vol. 232; p. 313.

Macy & Co., R. H., New York, N. Y. Cotton piece goods, nainsooks, and long-cloths. No. 98,116; Nov. 7; Gaz. vol. 232; p. 311.

Manhattan Electrical Supply Company, Jersey City, N. J., and New York, N. Y. Telegraph keys and sounders, lightning-arresters, electric relays, cut-outs, &c. No. 97,733; Nov. 7; Gaz. vol. 232; p. 308.

McClanahan, James S., Justin, Tex. Salve for catarrh, sore throat, tonsillitis, and croup. No. 94,504; Nov. 7; Gaz. vol. 232; p. 302.

Mertin, Rudolph, Boston, Mass. Laxatives. No. 97,956; Nov. 7; Gaz. vol. 232; p. 309.

Neenah Paper Company, Neenah, Wis. Bond and ledger paper. No. 97,924; Nov. 7; Gaz. vol. 232; p. 309.

Newspaper Feature Service Inc., New York, N. Y. Newspaper-section. No. 96,877; Nov. 7; Gaz. vol. 232; p. 304.

North Star Woolen Mill Co., Minneapolis, Minn. Woven woolen fabrics. No. 98,443; Nov. 7; Gaz. vol. 232; p. 313.

Oppenheim, Collins & Company, New York, New York, N. Y. Waists, undergarments, and hosiery. No. 96,933; Nov. 7; Gaz. vol. 232; p. 305.

Otto Eisenlohr & Bros. Incorporated, Philadelphia, Pa. Cigars. No. 97,964; Nov. 7; Gaz. vol. 232; p. 309.

Palmetto Products Company, Inc., New York, N. Y. Twines and ropes made from shredded fibers of palmetto or palm leaves. No. 95,683; Nov. 7; Gaz. vol. 232; p. 303.

Palmetto Products Company, Inc., New York, N. Y. Twines and ropes made from shredded palmetto or palm leaves No. 95,684; Nov. 7; Gaz. vol. 232; p. 303.

Peninsular Chemical Company, Detroit, Mich. Hot-water bottles and fountain-syringes. No. 97,978; Nov. 7; Gaz. vol. 232; p. 310.

Perrucci, Delfo, New York, N. Y. Stomach-tonic. No. 96,905; Nov. 7; Gaz. vol. 232; p. 304.

Petroleum Products Co. of California, San Francisco, Cal. Gasolene, benzin, naphtha-kerosene, motor-spirit, &c. No. 93,469; Nov. 7; Gaz. vol. 232; p. 301.

Pompeian Co., Baltimore, Md. Macaroni, cheese, and olive-oil emulsion. No. 94,581; Nov. 7; Gaz. vol. 232; p. 302.

Pompeian Co., Baltimore, Md. Olive-oil emulsion. No. 94,582; Nov. 7; Gaz. vol. 232; p. 302.

Prather, Orville L., Claremore, Okla. Hair-tonic, shampoo preparations, cold-cream, powder, and rouge. No. 95,979; Nov. 7; Gaz. vol. 232; p. 303.

Pratt, William E., Chicago, Ill. Hog and pig rings. No. 91,081; Nov. 7; Gaz. vol. 232; p. 300.

Quaker-Kola Company, Wilmington, Del., and Philadelphia, Pa. Soft drink. No. 98,271; Nov. 7; Gaz. vol. 232; p. 313.

Rennous, Kleinle & Company, Baltimore, Md. Paint, varnish, whitewash, calcimine, and brushes. No. 98,061; Nov. 7; Gaz. vol. 232; p. 311.

Rennous, Kleinle & Company, Baltimore, Md. Paint, varnish, whitewash, calcimine, and brushes. No. 98,063; Nov. 7; Gaz. vol. 232; p. 311.

Rice-Stix Dry Goods Company, St. Louis, Mo. Hosiery. No. 91,402; Nov. 7; Gaz. vol. 232; p. 300.

Robbins, John B., Malden, Mass. Chewing-gum. No. 97,096; Nov. 7; Gaz. vol. 232; p. 305.

Roessel & Co., Louis, New York, N. Y. Crape silk. No. 98,099; Nov. 7; Gaz. vol. 232; p. 311.

Röhm & Haas, Philadelphia, Pa. Medicinal chemical for treatment of rheumatism. No. 95,426; Nov. 7; Gaz. vol. 232; p. 302.

Romann & Bush Pig Iron & Coke Co., St. Louis, Mo. Coal. No. 97,929; Nov. 7; Gaz. vol. 232; p. 309.

S. B. Goff & Sons Co., Camden, N. J. Remedy for indigestion, constipation, heartburn, &c. No. 97,302; Nov. 7; Gaz. vol. 232; p. 306.

Saleeby, Samuel K., New York, N. Y. Medical and pharmaceutical preparation for the curing of corns. No. 98,393; Nov. 7; Gaz. vol. 232; p. 313.

Samuel C. Tatum Co., Cincinnati, Ohio. Punching-machines as office appliances for perforating sheets. No. 98,251; Nov. 7; Gaz. vol. 232; p. 313.

Samuels Shoe Company, St. Louis, Mo. Leather shoes. No. 97,002; Nov. 7; Gaz. vol. 232; p. 305.

Schnull & Co., Indianapolis, Ind. Coffee. No. 91,333; Nov. 7; Gaz. vol. 232; p. 300.

Shrauger & Johnson, Atlantic, Iowa. Metal cupolas, ventilators, window frames and sashes, &c. No. 96,416; Nov. 7; Gaz. vol. 232; p. 304.

Sidney Blumenthal & Company, New York, N. Y. Plushes in the piece. No. 98,129; Nov. 7; Gaz. vol. 232; p. 311.

Smith-Dorsey Company, Lincoln, Nebr. Remedy for neuralgia and rheumatism in all forms. No. 96,738; Nov. 7; Gaz. vol. 232; p. 304.

Smolowitz, Meyer, New York, N. Y. Laces and cotton goods in the piece. No. 95,180; Nov. 7; Gaz. vol. 232; p. 302.

Star Corundum Wheel Co., Detroit, Mich. Grinding-wheels. No. 98,503; Nov. 7; Gaz. vol. 232; p. 313.

Stonega Coke & Coal Co., Big Stone Gap and Wise and Lee counties, Va. Coal and coke. No. 96,909; Nov. 7; Gaz. vol. 232; p. 305.

Tate Electrolytic Waterproofing Company Incorporated, New York, N. Y. Waterproofed fabric. No. 97,244; Nov. 7; Gaz. vol. 232; p. 306.

Tate Electrolytic Waterproofing Company Incorporated, New York, N. Y. Waterproofed threads and warns. No. 97,245; Nov. 7; Gaz. vol. 232; p. 306.

Texas Tobacco Co., San Antonio, Tex. Smoking-tobacco. No. 98,036; Nov. 7; Gaz. vol. 232; p. 311.

Tioga Mill & Elevator Co., Waverly, N. Y. Dairy feed. No. 98,106; Nov. 7; Gaz. vol. 232; p. 311.

Traveler Remedy Co., Hot Springs, Ark. Liver-tonic. No. 89,497; Nov. 7; Gaz. vol. 232; p. 300.

United Cigar Manufacturers Company, New York, N. Y. Cigars. No. 97,484; Nov. 7; Gaz. vol. 232; p. 307.

United Cigar Manufacturers Company, New York, N. Y. Cigars. No. 97,488; Nov. 7; Gaz. vol. 232; p. 307.

United Drug Company, Boston, Mass. Candy. No. 98,199; Nov. 7; Gaz. vol. 232; p. 312.

Vacuum Can Co., Chicago, Ill. Food-containers. No. 97,101; Nov. 7; Gaz. vol. 232; p. 305.

Wailes Dove Bitumastic Limited, Newcastle-upon-Tyne, England. Ready-mixed and solid-block paints. No. 96,575; Nov. 7; Gaz. vol. 232; p. 304.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 7TH DAY OF NOVEMBER, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

Acetyl cellulose plastic compounds, Making. W. G. Lindsay. No. 1,203,756; Nov. 7; Gaz. vol. 232; p. 72.
Adding-machine. A. W. Lawrence. No. 1,204,284; Nov. 7; Gaz. vol. 232; p. 254.
Adhesive from waste sulfite liquor, Making an. J. A. De Cew. No. 1,203,856; Nov. 7; Gaz. vol. 232; p. 108.
Adhesive material, Method of and apparatus for producing rolls of. W. F. Codrington. No. 1,204,248; Nov. 7; Gaz. vol. 232; p. 243.
Adjustable set-wrench. J. J. Thull. No. 1,204,208; Nov. 7; Gaz. vol. 232; p. 229.
Advertising, Coöperative. G. A. Annable. No. 1,204,331; Nov. 7; Gaz. vol. 232; p. 270.
Advertising-dart. L. J. Disser. No. 1,203,714; Nov. 7; Gaz. vol. 232; p. 57.
Agricultural implement. A. Wyles, Jr. No. 1,204,224; Nov. 7; Gaz. vol. 232; p. 235.
Agricultural implement, Self-contained motor-driven. A. Wyles, Jr. No. 1,204,223; Nov. 7; Gaz. vol. 232; p. 235.
Agricultural implement, Self-propelled. A. Wyles, Jr. No. 1,204,225; Nov. 7; Gaz. vol. 232; p. 236.
Agricultural implement, Self-propelled. A. Wyles, Jr. No. 1,204,226; Nov. 7; Gaz. vol. 232; p. 236.
Air-brake, Electromagnetic. E. R. Humphrey. No. 1,203,877; Nov. 7; Gaz. vol. 232; p. 115.
Air, Drying and sterilizing. R. P. Van Calcar, J. Ellerman, and H. J. Martijn. No. 1,203,941; Nov. 7; Gaz. vol. 232; p. 138.
Alarm: *See*—
Boiler-alarm.
Alarm. F. M. Fargo and G. L. Thom. No. 1,203,995; Nov. 7; Gaz. vol. 232; p. 156.
Alloy. J. T. Dwyer. No. 1,203,991; Nov. 7; Gaz. vol. 232; p. 154.
Amalgamator. W. P. Alderson. No. 1,204,231; Nov. 7; Gaz. vol. 232; p. 238.
Ammunition-hoist. J. A. Killinger and A. W. Bean. No. 1,204,360; Nov. 7; Gaz. vol. 232; p. 280.
Animal-trap. J. B. Fioretta. No. 1,203,997; Nov. 7; Gaz. vol. 232; p. 156.
Auto-light dimmer. A. A. Flory. No. 1,204,350; Nov. 7; Gaz. vol. 232; p. 277.
Automobile. R. S. Fend. No. 1,204,146; Nov. 7; Gaz. vol. 232; p. 207.
Automobile. E. D. Self. No. 1,203,796; Nov. 7; Gaz. vol. 232; p. 85.
Automobile-accelerator pedal B. D. Adams. No. 1,203,955; Nov. 7; Gaz. vol. 232; p. 143.
Automobile, Attachment for connecting the frame and axle of an. H. C. Fripp. No. 1,204,001; Nov. 7; Gaz. vol. 232; p. 157.
Automobile back-stop brake. L. Hornor. No. 1,203,876; Nov. 7; Gaz. vol. 232; p. 114.
Automobile-controlling device. J. L. Hecht. No. 1,204,014; Nov. 7; Gaz. vol. 232; p. 161.
Automobile-jack. A. R. Taylor. No. 1,203,811; Nov. 7; Gaz. vol. 232; p. 90.
Automobile safety device. J. H. Neal. No. 1,204,375; Nov. 7; Gaz. vol. 232; p. 286.
Automobile-signal. T. Hori. No. 1,204,020; Nov. 7; Gaz. vol. 232; p. 164.
Automobile-wheel traction device. G. S. Maxwell. No. 1,203,764; Nov. 7; Gaz. vol. 232; p. 75.
Automobiles, Flag-holder for. T. K. Surface. No. 1,203,937; Nov. 7; Gaz. vol. 232; p. 136.
Awnings and shades, Means for arresting the unwinding of. F. Bailey. No. 1,203,840; Nov. 7; Gaz. vol. 232; p. 101.
Axle, Vehicle-. J. Anderson. No. 1,203,957; Nov. 7; Gaz. vol. 232; p. 143.
Baby-walker, Collapsible. E. T. Condon, Jr. No. 1,204,249; Nov. 7; Gaz. vol. 232; p. 244.
Bag: *See*—
Nose-bag.
Bag-filling machine. J. W. Howard. No. 1,204,274; Nov. 7; Gaz. vol. 232; p. 252.
Bag-holder. W. R. Bolin. No. 1,203,843; Nov. 7; Gaz. vol. 232; p. 103.
Bait, Artificial. G. F. Strube. No. 1,204,204; Nov. 7; Gaz. vol. 232; p. 229.
Ball: *See*—
Bowling-ball.
Banding bills and the like, Machine for. C. S. Batdorf. No. 1,204,118; Nov. 7; Gaz. vol. 232; p. 199.
Barrel-hoop. E. F. Beugler. No. 1,203,688; Nov. 7; Gaz. vol. 232; p. 49.
Barrel, Metallic. W. E. Bemis. No. 1,203,687; Nov. 7; Gaz. vol. 232; p. 48.
Bath appliance. F. O. Hilfiker. No. 1,203,874; Nov. 7; Gaz. vol. 232; p. 114.
Bath-tub shower and needle bath. H. A. Callon. No. 1,203,579; Nov. 7; Gaz. vol. 232; p. 9.
Beam-clamping device. R. S. Heap. No. 1,203,733; Nov. 7; Gaz. vol. 232; p. 63.
Bearing for shafts, spindles, and the like. G. L. Pratt. No. 1,204,063; Nov. 7; Gaz. vol. 232; p. 180.
Bearings, Cage for ball-. F. Starin. No. 1,203,928; Nov. 7; Gaz. vol. 232; p. 633.
Bed, Hospital-. J. E. Fazakerley. No. 1,203,721; Nov. 7; Gaz. vol. 232; p. 59.
Beehive. G. P. Wood. No. 1,203,675; Nov. 7; Gaz. vol. 232; p. 43.
Beers, Making practically alcohol-free. C. Reiter. No. 1,204,315; Nov. 7; Gaz. vol. 232; p. 265.
Belt. W. Duecker. No. 1,203,859; Nov. 7; Gaz. vol. 232; p. 109.
Belt-controlling device. R. F. McFeely. No. 1,204,371; Nov. 7; Gaz. vol. 232; p. 284.
Belt, Endless conveyer-. C. T. Westlin. No. 1,203,827; Nov. 7; Gaz. vol. 232; p. 97.
Bench-clamp. J. M. Briles. No. 1,203,692; Nov. 7; Gaz. vol. 232; p. 50.
Berry-box. L. P. Lord. No. 1,204,367; Nov. 7; Gaz. vol. 232; p. 283.
Beverage extracts, Manufacture of. J. L. Kellogg. No. 1,204,032; Nov. 7; Gaz. vol. 232; p. 168.
Beverage extracts, Manufacture of. J. L. Kellogg. No. 1,204,358; Nov. 7; Gaz. vol. 232; p. 280.
Bicycles and similar vehicles, Motor fore-carriage for. G. Stagni. No. 1,203,927; Nov. 7; Gaz. vol. 232; p. 133.
Bill-board and refuse-container, Columnar. A. H. Woods. No. 1,203,952; Nov. 7; Gaz. vol. 232; p. 141.
Billiard-cue. J. H. Goodell. No. 1,204,152; Nov. 7; Gaz. vol. 232; p. 209.
Block: *See*—
Building-block. Cut-out block.
Block-mold. W. M. Hickman and I. Canniff. No. 1,204,354; Nov. 7; Gaz. vol. 232; p. 279.
Board: *See*—
Bill-board. Game-board.
Bulletin-board. Ironing-board.
Boat-hull. C. A. Pfeiffer. No. 1,204,058; Nov. 7; Gaz. vol. 232; p. 178.
Boat, Motor-. W. A. Hickman. No. 1,204,355; Nov. 7; Gaz. vol. 232; p. 279.
Boiler-alarm. C. M. Clark and R. W. Andrews. No. 1,203,979; Nov. 7; Gaz. vol. 232; p. 149.
Boll-weevil destroyer, Cotton-. W. R. White. No. 1,204,101; Nov. 7; Gaz. vol. 232; p. 193.
Bolt-keeper. J. J. Thull. No. 1,204,209; Nov. 7; Gaz. vol. 232; p. 230.
Bolts, Manufacturing. E. I. Dodds. No. 1,204,255; Nov. 7; Gaz. vol. 232; p. 245.
Boot, Rubber. C. Lee. No. 1,204,365; Nov. 7; Gaz. vol. 232; p. 282.
Boiler: *See*—
Washboiler.
Bolt: *See*—
Resilient bolt.
Boring-drill, Rotary. H. R. Hughes. No. 1,204,022; Nov. 7; Gaz. vol. 232; p. 164.
Boring-tool. H. Casler. No. 1,204,339; Nov. 7; Gaz. vol. 232; p. 273.
Bottle, Non-refillable. T. Sandgeroth. No. 1,204,073; Nov. 7; Gaz. vol. 232; p. 184.
Bottle-opening device. M. Nagy. No. 1,204,305; Nov. 7; Gaz. vol. 232; p. 262.
Bottle stopper and dropper. J. Brosnan. No. 1,204,125; Nov. 7; Gaz. vol. 232; p. 201.
Bottle stopper and pipette. C. A. Simpson. No. 1,303,919; Nov. 7; Gaz. vol. 232; p. 129.

Bowling-ball, Composition. P. J. Klopsch. No. 1,303,747; Nov. 7; Gaz. vol. 232; p. 69.
Box: *See*—
Berry-box.
Mail-box.
Match-box.
Signal-box.
Sound-box.
Box. A. H. Dreux. No. 1,203,990; Nov. 7; Gaz. vol. 232; p. 154.
Box-shuck machines, Feed mechanism for. F. Schafer. No. 1,203,012; Nov. 7; Gaz. vol. 232; p. 127.
Box topping and taping machine. F. C. Simon and J. F. O'Brien. No. 1,204,079; Nov. 7; Gaz. vol. 232; p. 186.
Bracket: *See*—
Curtain-rod bracket.
Braiding and coating mechanism. R. C. Rahm and T. V. Wilson. No. 1,204,065; Nov. 7; Gaz. vol. 232; p. 181.
Brake: *See*—
Air-brake.
Automobile back-stop brake.
Vehicle-brake.
Brake mechanism for vehicles. G. S. Albanese. No. 1,203,956; Nov. 7; Gaz. vol. 232; p. 143.
Bread, Leavened. H. A. Kohman, T. M. Godfrey, and L. H. Ashe. No. 1,204,281; Nov. 7; Gaz. vol. 232; p. 253.
Bread, Manufactured. H. A. Kohman, T. M. Godfrey, and L. Ashe. No. 1,204,280; Nov. 7; Gaz. vol. 232; p. 253.
Bridge, Bascule-. T. E. Brown. No. 1,203,695; Nov. 7; Gaz. vol. 232; p. 51.
Brooch. C. G. King. No. 1,203,882; Nov. 7; Gaz. vol. 232; p. 117.
Brush and broom handle. A. D. Long. No. 1,203,886; Nov. 7; Gaz. vol. 232; p. 118.
Brush, Rotary tooth-. I. Louis. No. 1,203,636; Nov. 7; Gaz. vol. 232; p. 29.
Building-block, Ventilated. H. R. Straight. No. 1,203,934; Nov. 7; Gaz. vol. 232; p. 136.
Bulletin-board. W. H. Dietz. No. 1,203,712; Nov. 7; Gaz. vol. 232; p. 57.
Burner: *See*—
Hydrocarbon-burner.
Liquid-fuel burner.
Multiple blast-burner.
Burner and oven. E. D. Baxter. No. 1,203,960; Nov. 7; Gaz. vol. 232; p. 144.
Butcher's knife. W. F. Lutz. No. 1,203,637; Nov. 7; Gaz. vol. 232; p. 29.
Button-feeding mechanism. C. F. Richardson. No. 1,204,067; Nov. 7; Gaz. vol. 232; p. 181.
Button, Releasable self-fastening. E. I. and E. Jaffe. No. 1,204,159; Nov. 7; Gaz. vol. 232; p. 212.
Cab-signal and automatic stop. M. B. Bulla. No. 1,203,968; Nov. 7; Gaz. vol. 232; p. 146.
Cabinet. H. C. Fratt. No. 1,204,263; Nov. 7; Gaz. vol. 232; p. 248.
Cabinet, Kitchen-. D. R. Curtenius. No. 1,203,589; Nov. 7; Gaz. vol. 232; p. 13.
Cabinet, Kitchen-. W. H. Phenice. No. 1,204,059; Nov. 7; Gaz. vol. 232; p. 178.
Cable-clamp. F. M. Raymond. No. 1,203,782; Nov. 7; Gaz. vol. 232; p. 81.
Cake-cutter. O. J. Goodwin. No. 1,204,009; Nov. 7; Gaz. vol. 232; p. 160.
Cake turner, Griddle-. W. Vogel. No. 1,203,665; Nov. 7; Gaz. vol. 232; p. 39.
Calculator, Mechanical. H. Ellis. No. 1,203,863; Nov. 7; Gaz. vol. 232; p. 110.
Can: *See*—
Dredging-can.
Gasolene, &c., can.
Milk-can.
Candelabrum. W. L. Connolly. No. 1,204,134; Nov. 7; Gaz. vol. 232; p. 204.
Car body. E. E. Slick. No. 1,203,801; Nov. 7; Gaz. vol. 232; p. 87.
Car-coupling. A. J. Bazeley. No. 1,204,119; Nov. 7; Gaz. vol. 232; p. 199.
Car-coupling. A. J. Bazeley. No. 1,204,334; Nov. 7; Gaz. vol. 232; p. 271.
Car door, Grain-. J. Wiemer. No. 1,203,948; Nov. 7; Gaz. vol. 232; p. 140.
Car-fender. R. H. Wilson. No. 1,204,222; Nov. 7; Gaz. vol. 232; p. 234.
Car, Motor-driven. J. F. Howie. No. 1,203,741; Nov. 7; Gaz. vol. 232; p. 66.
Car-starter. J. Malinlak. No. 1,203,889; Nov. 7; Gaz. vol. 232; p. 119.
Car-step, Folding. J. R., J. L., and E. E. Dugger. No. 1,204,256; Nov. 7; Gaz. vol. 232; p. 246.
Car wheel, Mine-. E. E. Slick. No. 1,203,800; Nov. 7; Gaz. vol. 232; p. 87.
Cars, Metal wall for railway-. W. T. Van Dorn. No. 1,203,819; Nov. 7; Gaz. vol. 232; p. 93.
Carbureter. C. H. Claudel. No. 1,204,247; Nov. 7; Gaz. vol. 232; p. 243.
Carbureter. W. M. Fulton. No. 1,203,601; Nov. 7; Gaz. vol. 232; p. 17.
Carbureter. J. R. Johnson. No. 1,204,029; Nov. 7; Gaz. vol. 232; p. 167.
Carrier: *See*—
Egg-carrier.
Shade-carrier.
Straw-carrier.
Carton, Folding. V. C. Snyder. No. 1,203,924; Nov. 7; Gaz. vol. 232; p. 135.
Cartridge, Multiple. C. Papuga. No. 1,203,649; Nov. 7; Gaz. vol. 232; p. 34.
Case: *See*—
Tennis-racket-frame case.
Caster. F. Janzen. No. 1,203,879; Nov. 7; Gaz. vol. 232; p. 116.
Casting apparatus. H. H. Hewitt. No. 1,203,619; Nov. 7; Gaz. vol. 232; p. 23.
Catch and carrying machine, Automatic. P. Kuznor. No. 1,203,749; Nov. 7; Gaz. vol. 232; p. 70.
Ceiling-rose. E. I. Parkes. No. 1,203,650; Nov. 7; Gaz. vol. 232; p. 34.
Celluloid articles, Machine for making seamless. J. N. Whitehouse. No. 1,203,947; Nov. 7; Gaz. vol. 232; p. 139.
Cement boards, Apparatus for manufacturing. A. B. Starr. No. 1,204,083; Nov. 7; Gaz. vol. 232; p. 187.
Cement, Marbleizing. F. Spencer. No. 1,204,378; Nov. 7; Gaz. vol. 232; p. 287.
Centrifugal extractor, Electrically-operated. W. Bartholomew and C. H. Allen. No. 1,203,567; Nov. 7; Gaz. vol. 232; p. 4.
Chair: *See*—
Dental chair.
Chemical heater and composition of matter therefor. T. M. Paschal. No. 1,203,776; Nov. 7; Gaz. vol. 232; p. 79.
Cherry-pitting device. N. O. French. No. 1,203,600; Nov. 7; Gaz. vol. 232; p. 16.
Chuck. C. E. Johnson. No. 1,204,025; Nov. 7; Gaz. vol. 232; p. 165.
Chucks, Device for adjusting the jaws of revolving lathe-. A. Kipniss. No. 1,203,628; Nov. 7; Gaz. vol. 232; p. 26.
Cigar-cutter and lid-holder, Combined. W. S. Luckett. No. 1,204,289; Nov. 7; Gaz. vol. 232; p. 256.
Cigar receptacle, Lighted-. L. M. Myers. No. 1,204,178; Nov. 7; Gaz. vol. 232; p. 220.
Cigarette and match box, Combined. J. Malicki. No. 1,203,640; Nov. 7; Gaz. vol. 232; p. 31.
Cinematographic and phonographic records, Apparatus for preparing combined. K. von Madaler. No. 1,204,091; Nov. 7; Gaz. vol. 232; p. 190.
Circuit-controller. R. H. Manson. No. 1,203,641; Nov. 7; Gaz. vol. 232; p. 31.
Circuit-controlling device. H. E. Warren. No. 1,203,825; Nov. 7; Gaz. vol. 232; p. 96.
Clamp: *See*—
Bench-clamp.
Cable-clamp.
Sewing-machine needle-clamp.
Washboard-clamp.
Clasp: *See*—
Tie-clasp.
Clasp. E. D. Nichols. No. 1,203,771; Nov. 7; Gaz. vol. 232; p. 77.
Clay-purifier. O. O. Erfurth. No. 1,204,261; Nov. 7; Gaz. vol. 232; p. 247.
Cleaner: *See*—
Cotton-cleaner.
Track-cleaner.
Window-cleaner.
Clip: *See*—
Pen-clip.
Clip. A. Mieden. No. 1,204,373; Nov. 7; Gaz. vol. 232; p. 285.
Clipping-shears. F. C. Biggert, Jr. No. 1,203,842; Nov. 7, ; Gaz. vol. 232; p. 102.
Closet: *See*—
Water-closet.
Cloth-napping machine, Planetary. D. Gessner. No. 1,204,150; Nov. 7; Gaz. vol. 232; p. 209.
Cloth stretcher and straightener. J. Edmunds. No. 1,203,719; Nov. 7; Gaz. vol. 232; p. 58.
Clutch device. F. Carlsson. No. 1,203,976; Nov. 7; Gaz. vol. 232; p. 148.
Clutch, Feed-roll. J. F. Milligan. No. 1,203,894; Nov. 7; Gaz. vol. 232; p. 121.
Clutch-lubricating means. K. Rushton. No. 1,204,194; Nov. 7; Gaz. vol. 232; p. 225.
Clutch-operating means. C. Evers and F. Carlsson. No. 1,203,994; Nov. 7; Gaz. vol. 232; p. 155.
Coal-feeding apparatus, Pulverized-. L. B. Chevalier. No. 1,203,703; Nov. 7; Gaz. vol. 232; p. 54.
Coal-loading apparatus. H. B. Doherty. No. 1,204,348; Nov. 7; Gaz. vol. 232; p. 276.
Coated material, Treating. G. A. Gilbert and M. L. Daugherty. No. 1,204,151; Nov. 7; Gaz. vol. 232; p. 209.
Coffee-container. F. P. Wood. No. 1,203,832; Nov. 7; Gaz. vol. 232; p. 98.
Coin and ticket holder, Combined. F. G. Holland. No. 1,204,018; Nov. 7; Gaz. vol. 232; p. 163.
Colander. M. S. Wales. No. 1,203,820; Nov. 7; Gaz. vol. 232; p. 94.
Collarets, Cutting and arranging material for. G. W. Eberley. No. 1,203,862; Nov. 7; Gaz. vol. 232; p. 110.
Color-lakes fast to light. E. Meckbach. No. 1,203,642; Nov. 7; Gaz. vol. 232; p. 31
Comb. N. G. Abbate. No. 1,204,230; Nov. 7; Gaz. vol. 232; p. 237.
Concentrator. L. W. Barber. No. 1,204,333; Nov. 7; Gaz. vol. 232; p. 271.
Concrete-mixers, Mounting for drums of. E. W. Brackenbury. No. 1,203,575; Nov. 7; Gaz. vol. 232; p. 7.
Concrete-structure base. R. Linkletter. No. 1,203,757; Nov. 7; Gaz. vol. 232; p. 72.
Concrete-tamper. E. G. Carr. No. 1,204,245; Nov. 7; Gaz. vol. 232; p. 242.

Concrete walls, floors, ceilings, &c., Sectional mold for. M. D. Morrill. No. 1,204,177; Nov. 7; Gaz. vol. 232; p. 219.
Condenser. W. W. Cassidy. No. 1,203,581; Nov. 7; Gaz. vol. 232; p. 10.
Contact material. C. Ellis and H. M. Weber. No. 1,204,143; Nov. 7; Gaz. vol. 232; p. 207.
Container. B. K. Ford. No. 1,203,866; Nov. 7; Gaz. vol. 232; p. 111.
Container. H. A. Meyers. No. 1,204,050; Nov. 7; Gaz. vol. 232; p. 175.
Control system and apparatus. A. J. Hall. No. 1,203,610; Nov. 7; Gaz. vol. 232; p. 20.
Conveying and loading apparatus. F. L. Stuart. No. 1,204,203; Nov. 7; Gaz. vol. 232; p. 228.
Cooker, High-pressure steam-. T. J. Nash. No. 1,204,055; Nov. 7; Gaz. vol. 232; p. 177.
Copy-holder. S. T. Smith. No. 1,203,659; Nov. 7; Gaz. vol. 232; p. 37.
Corn and callus remover. B. E. Hale. No. 1,203,869; Nov. 7; Gaz. vol. 232; p. 112.
Corn header, Kafir-. L. L. Beardsley. No. 1,203,961; Nov. 7; Gaz. vol. 232; p. 144.
Cotton-cleaner. E. E. Dickerson. No. 1,203,710; Nov. 7; Gaz. vol. 232; p. 56.
Cotton-cleaning apparatus. E. E. Dickerson. No. 1,203,709; Nov. 7; Gaz. vol. 232; p. 56.
Cotton ginning, cleaning, and bleaching mechanism. W. A. J. Hodo. No. 1,203,739; Nov. 7; Gaz. vol. 232; p. 65.
Counter, Mechanical. J. O. Morrison. No. 1,203,644; Nov. 7; Gaz. vol. 232; p. 32.
Coupling: *See*—
Car-coupling. Pipe-coupling.
Hose-coupling.
Crushing-roll. R. C. Newhouse. No. 1,203,901; Nov. 7; Gaz. vol. 232; p. 123.
Cultivator. G. C. Lewis. No. 1,204,287; Nov. 7; Gaz. vol. 232; p. 255.
Cultivator attachment. J. C. Mire. No. 1,204,298; Nov. 7; Gaz. vol. 232; p. 259.
Cultivator-disk mounting. G. W. Hoar. No. 1,203,737; Nov. 7; Gaz. vol. 232; p. 65.
Culvert. S. E. Moore. No. 1,203,768; Nov. 7; Gaz. vol. 232; p. 76.
Culvert, Metal. W. T. Shannon. No. 1,203,656; Nov. 7; Gaz. vol. 232; p. 36.
Cup: *See*—
Sputum-cup.
Cup holder, Sap-. J. O. Walker. No. 1,203,942; Nov. 7; Gaz. vol. 232; p. 138.
Current-limiting reactance-coil, Polyphase-. J. F. Peters. No. 1,204,377; Nov. 7; Gaz. vol. 232; p. 286.
Curtain-fastener. T. J. McMeekin. No. 1,204,173; Nov. 7; Gaz. vol. 232; p. 217.
Curtain-rod bracket. C. B. Miller. No. 1,203,765; Nov. 7; Gaz. vol. 232; p. 75.
Cut-out block. R. C. Cole. No. 1,203,584; Nov. 7; Gaz. vol. 232; p. 11.
Cutter: *See*—
Cake-cutter. Power-cutter.
Flue or tube cutter.
Dehydrater. C. Robinson. No. 1,204,070; Nov. 7; Gaz. vol. 232; p. 183.
Delivery apparatus. E. J. Feninger and J. O'Neal. No. 1,203,596; Nov. 7; Gaz. vol. 232; p. 15.
Delivery apparatus, Automatic despatching and selective. C. P. Hidden. No. 1,203,736; Nov. 7; Gaz. vol. 232; p. 64.
Dental chair. C. F. Betts. No. 1,203,572; Nov. 7; Gaz. vol. 232; p. 6.
Digger: *See*—
Potato-digger.
Disk drill. H. R. Hughes. No. 1,204,157; Nov. 7; Gaz. vol. 232; p. 211.
Dispensing apparatus. R. C. Bradley. No. 1,204,241; Nov. 7; Gaz. vol. 232; p. 241.
Dispensing device. D. J. Matthews. No. 1,203,763; Nov. 7; Gaz. vol. 232; p. 74.
Display-package. R. I. Bentley, Jr. No. 1,203,963; Nov. 7; Gaz. vol. 232; p. 145.
Display-rack. F. Lengquist and J. P. Wiles. No. 1,204,286; Nov. 7; Gaz. vol. 232; p. 255.
Door-catch. C. Evensen. No. 1,203,595; Nov. 7; Gaz. vol. 232; p. 15.
Door-opening device. N. Royack. No. 1,204,072; Nov. 7; Gaz. vol. 232; p. 184.
Door-operating device, Automatic. S. B. Roy. No. 1,204,318; Nov. 7; Gaz. vol. 232; p. 266.
Doors, Safety locking device for hatch-. H. D. Williams. No. 1,204,221; Nov. 7; Gaz. vol. 232; p. 234.
Dough-punching machine. E. and H. Heidland. No. 1,203,734; Nov. 7; Gaz. vol. 232; p. 63.
Dough-trough. C. B. Comstock. No. 1,203,705; Nov. 7; Gaz. vol. 232; p. 55.
Drawing sharp edges on metallic bodies, Machine for. C. Fuller. No. 1,203,723; Nov. 7; Gaz. vol. 232; p. 60.
Dredging-can. J. R. Harbeck. No. 1,203,872; Nov. 7; Gaz. vol. 232; p. 113.
Drill: *See*—
Boring-drill. Ratchet-drill.
Disk drill.
Drill. F. L. Rainbow. No. 1,203,780; Nov. 7; Gaz. vol. 232; p. 80.
Drilling-machine. H. T. Dunbar. No. 1,203,860; Nov. 7; Gaz. vol. 232; p. 109.
Drinking-tube, Sanitary. N. L. McKay. No. 1,204,171; Nov. 7; Gaz. vol. 232; p. 217.
Driving-gear, Tractor. A. Ortengren. No. 1,203,647; Nov. 7; Gaz. vol. 232; p. 33.
Drum. F. L. O'Conner. No. 1,204,182; Nov. 7; Gaz. vol. 232; p. 221.
Dust-guard. L. Y. Williams. No. 1,203,670; Nov. 7; Gaz. vol. 232; p. 41.
Dust-pan. A. J. Bump. No. 1,203,697; Nov. 7; Gaz. vol. 232; p 51.
Dynamometer, Torsion-. E. B. McCormick. No. 1,204,292; Nov. 7; Gaz. vol. 232; p. 257.
Edge-finishing machine. H. E. Enslin. No. 1,203,993; Nov. 7; Gaz. vol. 232; p. 155.
Educational appliance. E. N. Tuckey. No. 1,204,089; Nov. 7; Gaz. vol. 232; p. 189.
Egg-beater, cream-whip, and mixer. A. Knobel. No. 1,204,363; Nov. 7; Gaz. vol. 232; p. 281.
Egg-carrier. G. R. Andrews. No. 1,204,233; Nov. 7; Gaz. vol. 232; p. 238.
Egg-handling device. J. A. Terrio. No. 1,203,938; Nov. 7; Gaz. vol. 232; p. 137.
Egg-opening device. S. Markowitz. No. 1,203,891; Nov. 7; Gaz. vol. 232; p. 120.
Egg product and making same, Powdered-. G. C. Contant. No. 1,203,983; Nov. 7; Gaz. vol. 232; p. 151.
Egg tester and delivery box. T. McLaughlin. No. 1,204,172; Nov. 7; Gaz. vol. 232; p. 217.
Electric-arc furnace. C. O. A. Dovle. No. 1,204,349; Nov. 7; Gaz. vol. 232; p. 277.
Electric-circuit-closing device. W. W. Burke. No. 1,203,699; Nov. 7; Gaz. vol. 232; p. 52.
Electric-current distributer. W. C. Brinton, Jr. No. 1,203,693; Nov. 7; Gaz. vol. 232; p. 50.
Electric machine, Dynamo-. H. McQuillin. No. 1,203,759; Nov. 7; Gaz. vol. 232; p. 73.
Electric motor. W. Luyken. No. 1,204,290; Nov. 7; Gaz. vol. 232; p. 256.
Electric pack. H. Perlman. No. 1,204,185; Nov. 7; Gaz. vol. 232; p. 222.
Electric sockets, Securing means for. E. A. Kuen. No. 1,204,381; Nov. 7; Gaz. vol. 232; p. 288.
Electric switch. C. J. Klein. No. 1,203,746; Nov. 7; Gaz. vol. 232; p. 69.
Electrical-circuit-controlling system. E. H. Clark. No. 1,203,851; Nov. 7; Gaz. vol. 232; p. 106.
Electrical coil and winding same. C. Ryden. No. 1,203,789; Nov. 7; Gaz. vol. 232; p. 83.
Electrical conduit, Flexible. W. C. Robinson. No. 1,203,788; Nov. 7; Gaz. vol. 232; p. 83.
Electrical connection. W. C. Tregoning. No. 1,203,816; Nov. 7; Gaz. vol. 232; p. 92.
Electrical distribution system. A. S. Hubbard. No. 1,204,155; Nov. 7; Gaz. vol. 232; p. 210.
Electrical distribution system. J. W. Jepson. No. 1,204,160; Nov. 7; Gaz. vol. 232; p. 213.
Electrical heater. F. E. Carlson. No. 1,203,975; Nov. 7; Gaz. vol. 232; p. 148.
Electrical switch. M. G. Bunnell. No. 1,203,972; Nov. 7; Gaz. vol. 232; p. 147.
Elevating-jack. L. Sparks. No. 1,203,925; Nov. 7; Gaz. vol. 232; p. 132.
Elevator: *See*—
Water-elevator.
Elevator safety locking mechanism. J. Knezik. No. 1,204,362; Nov. 7; Gaz. vol. 232; p. 281.
Embroidering-machine. J. Granz. No. 1,204,269; Nov. 7; Gaz. vol. 232; p. 250.
Embroidery-embellishing device. I. Scheffknecht. No. 1,204,195; Nov. 7; Gaz. vol. 232; p. 225.
End-gate. A. W. Hasselbring. No. 1,203,732; Nov. 7; Gaz. vol. 232; p. 62.
Engine: *See*—
Gas-engine.
Internal-combustion engine.
Engine. W. Box. No. 1,203,574; Nov. 7; Gaz. vol. 232; p. 7.
Engine cylinder, Gas-. H. C. Stolz. No. 1,203,807; Nov. 7; Gaz. vol. 232; p. 89.
Engine ignition mechanism, Internal-combustion-. E. C. Wilcox and J. F. Cavanagh. No. 1,204,104; Nov. 7; Gaz. vol. 232; p. 194.
Engine starter, Gas-. G. Y. Lauchin. No. 1,204,164; Nov. 7; Gaz. vol. 232; p. 214.
Engine-starting and gear-shifting device. A. G. Batsner. No. 1,203,568; Nov. 7; Gaz. vol. 232; p. 5.
Engines, Auxiliary air-supply device for internal-combustion. H. C. Gilliam. No. 1,204,004; Nov. 7; Gaz. vol. 232; p. 158.
Engines, Charge-treating device for internal-combustion. N. H. Schickel. No. 1,203,791; Nov. 7; Gaz. vol. 232; p. 84.
Engines, Lock for elevator hoisting-. T. W. Shotto. No. 1,204,322; Nov. 7; Gaz. vol. 232; p. 267.
Entrenching-tool. F. P. Archer. No. 1,204,332; Nov. 7; Gaz. vol. 232; p. 271.
Envelop-machine. G. S. Otey. No. 1,203,904; Nov. 7; Gaz. vol. 232; p. 124.
Etching plates in photo-engraving, Apparatus for. J. J. C. Smith. No. 1,203,802; Nov. 7; Gaz. vol. 232; p. 87.
Evaporator. J. Harris and D. H. Thomas. No. 1,203,614; Nov. 7; Gaz. vol. 232; p. 22.
Exhibitor, Changeable. G. W. Cook. No. 1,204,135; Nov. 7; Gaz. vol. 232; p. 204.

Extensible holder. L. H. Adamson. No. 1,203,562; Nov. 7; Gaz. vol. 232; p. 3.
Extractor: *See*—
Centrifugal extractor.
Eye-shield. B. R. Rickards. No. 1,203,785; Nov. 7; Gaz. vol. 232; p. 82.
Eyeglass-frame. C. F. Ingold. No. 1,203,624; Nov. 7; Gaz. vol. 232; p. 25.
Eyelet, Shoe and glove. P. J. Johnson. No. 1,203,627; Nov. 7; Gaz. vol. 232; p. 26.
Farm implement. J. V. Sohn. No. 1,204,323; Nov. 7; Gaz. vol. 232; p. 267.
Fastening device. C. E. Lombard. No. 1,203,885; Nov. 7; Gaz. vol. 232; p. 118.
Fastening device. R. A. Whiteside. No. 1,203,669; Nov. 7; Gaz. vol. 232; p. 41.
Fastening device. M. E. Young. No. 1,204,227; Nov. 7; Gaz. vol. 232; p. 236.
Fabric: *See*—
Metal fabric.
Fats, Color concentrate for edible. C. Ellis. No. 1,203,594; Nov. 7; Gaz. vol. 232; p. 15.
Feed mechanism. A. L. Pye. No. 1,204,188; Nov. 7; Gaz. vol. 232; p. 223.
Feed-water apparatus. G. W. Mohr. No. 1,204,052; Nov. 7; Gaz. vol. 232; p. 176.
Feed-water purifier. W. E. McComb. No. 1,204,370; Nov. 7; Gaz. vol. 232; p. 284.
Feeder, Poultry-. A. A. Fair. No. 1,203,865; Nov. 7; Gaz. vol. 232; p. 111.
Fence-post. J. Pickrell. No. 1,204,187; Nov. 7; Gaz. vol. 232; p. 222.
Fence-post. C. Slyfield. No. 1,203,920; Nov. 7; Gaz. vol. 232; p. 129.
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Fibrous materials, Apparatus for treating. E. D. Jefferson. No. 1,204,357; Nov. 7; Gaz. vol. 232; p. 280.
Filaments, Support for metallic glow-. A. Lederer. No. 1,203,635; Nov. 7; Gaz. vol. 232; p. 29.
File, Flesh-. N. E. Sibley. No. 1,203,918; Nov. 7; Gaz. vol. 232; p. 129.
Filter. A. Rosenthal. No. 1,204,071; Nov. 7; Gaz. vol. 232; p. 183.
Filter. E. Zahm. No. 1,203,835; Nov. 7; Gaz. vol. 232; p. 99.
Filter, Motion-picture color-. E. Zollinger and S. Mischonsniky. No. 1,203,681; Nov. 7; Gaz. vol. 232; p. 40.
Filter, Pressure-. E. J. Sweetland. (Reissue.) No. 14,213; Nov. 7; Gaz. vol. 232; p. 291.
Fire-door. J. Bogenberger. No. 1,203,965; Nov. 7; Gaz. vol. 232; p. 145.
Fire door or shutter. F. L. Saino. No. 1,204,074; Nov. 7; Gaz. vol. 232; p. 184.
Fire-extinguisher. H. M. McCaslin. No. 1,204,040; Nov. 7; Gaz. vol. 232; p. 171.
Fire-extinguisher, Hand. H. M. McCaslin. No. 1,204,041; Nov. 7; Gaz. vol. 232; p. 171.
Firearm safety attachment. J. H. Carl. No. 1,203,848; Nov. 7; Gaz. vol. 232; p. 105.
Fireplace. W. S. O'Brien. No. 1,203,773; Nov. 7; Gaz. vol. 232; p. 78.
Flash-light, Trainman's. J. E. Brodhead. No. 1,203,576; Nov. 7; Gaz. vol. 232; p. 8.
Floor-covering, Grass. J. A. Fenton. No. 1,203,597; Nov. 7; Gaz. vol. 232; p. 16.
Flue or tube cutter. W. Flanagan. No. 1,204,148; Nov. 7; Gaz. vol. 232; p. 208.
Fluid transmission. F. O. Kilgore. No. 1,203,745; Nov. 7; Gaz. vol. 232; p. 68.
Fluids, Apparatus for evaporation of. F. P. Bergh, H. J. Loebinger, and H. C. Neuberger. No. 1,204,121; Nov. 7; Gaz. vol. 232; p. 200.
Flush-tank. W. M. Fulton. No. 1,203,602; Nov. 7; Gaz. vol. 232; p. 17.
Fly-wheel, Adjustable. H. A. Naylor. No. 1,204,180; Nov. 7; Gaz. vol. 232; p. 220.
Flying-machine. G. H. Curtiss. No. 1,204,380; Nov. 7; Gaz. vol. 232; p. 287.
Folding-machine. G. L. Fulk. No. 1,203,722; Nov. 7; Gaz. vol. 232; p. 60.
Folding table. H. R. Reischmann. No. 1,203,783; Nov. 7; Gaz. vol. 232; p. 81.
Forging balls, Process of and apparatus for. F. M. Canda. No. 1,204,127; Nov. 7; Gaz. vol. 232; p. 202.
Form for displaying clothing. A. J. Torrison. No. 1,203,815; Nov. 7; Gaz. vol. 232; p. 92.
Form stand, Collapsible garment-. I. Levin. No. 1,204,038; Nov. 7; Gaz. vol. 232; p. 170.
Frame: *See*—
Eyeglass-frame. Picture-frame.
Hair-drying frame. Tent-frame.
Freezing apparatus, Liquid-. H. P. Roberts. No. 1,204,317; Nov. 7; Gaz. vol. 232; p. 266.
Fruit-pitter. C. H. Wilson. No. 1,203,830; Nov. 7; Gaz. vol. 232; p. 98.
Fruit-pitting machine. W. W. Mamel, Sr. No. 1,204,175; Nov. 7; Gaz. vol. 232; p. 218.
Furnace: *See*—
Electric-arc furnace. Plumber's furnace.
Ore-roasting furnace.
Furnaces, Flue and valve arrangement for reversing regenerator-. L. L. Knox. No. 1,203,748; Nov. 7; Gaz. vol. 232; p. 69.
Furniture, &c., and making it, Covering material for. H. B. Morris. No. 1,203,896; Nov. 7; Gaz. vol. 232; p. 121.
Gage: *See*—
Garment-gage. Water-gage.
Game. L. Goldmerstein. No. 1,204,006; Nov. 7; Gaz. vol. 232; p. 159.
Game apparatus. J. L. McCaskey. No. 1,204,291; Nov. 7; Gaz. vol. 232; p. 257.
Game-board. W. C. Carter. No. 1,204,246; Nov. 7; Gaz. vol. 232; p. 242.
Game device. J. F. Stephan. No. 1,203,805; Nov. 7; Gaz. vol. 232; p. 88.
Game of skill. A. V. and O. T. Clorius. No. 1,203,852; Nov. 7; Gaz. vol. 232; p. 106.
Garbage-disposal apparatus. N. C. Johnson. No. 1,203,743; Nov. 7; Gaz. vol. 232; p. 67.
Garment gage and marker. F. W. and A. G. Starke. No. 1,203,929; Nov. 7; Gaz. vol. 232; p. 133.
Gas-apparatus safety appliance. J. M. Stabel. No. 1,204,081; Nov. 7; Gaz. vol. 232; p. 187.
Gas-burner tip. P. Keller. No. 1,204,278; Nov. 7; Gaz. vol. 232; p. 253.
Gas-engine. R. S. Moore. No. 1,203,767; Nov. 7; Gaz. vol. 232; p. 76.
Gas generator and device for feeding carbid, Acetylene-. H. E. Henwood. No. 1,204,015; Nov. 7; Gaz. vol. 232; p. 162.
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Gas-plate. G. E. Pickup. No. 1,203,907; Nov. 7; Gaz. vol. 232; p. 125.
Gases, Means for heating. J. Weber. No. 1,203,944; Nov. 7; Gaz. vol. 232; p. 138.
Gases under pressure, Charging or replenishing receptacles with. T. E. Smith. No. 1,203,922; Nov. 7; Gaz. vol. 232; p. 130.
Gasket. C. I. E. Mastin. No. 1,203,762; Nov. 7; Gaz. vol. 232; p. 74.
Gasolene, &c., can. I. E. Sexton. No. 1,203,797; Nov. 7; Gaz. vol. 232; p. 86.
Gate: *See*—
End-gate.
Gear-cutting machine. J. E. Gleason, A. L. Stewart, and E. W. Bullock. No. 1,203,608; Nov. 7; Gaz. vol. 232; p. 19.
Gearing. H. Chrisman. No. 1,204,251; Nov. 7; Gaz. vol. 232; p. 244.
Gearing. R. K. Le Blond and W. F. Groene. No. 1,203,751; Nov. 7; Gaz. vol. 232; p. 70.
Gearing. J. G. P. Thomas. No. 1,203,662; Nov. 7; Gaz. vol. 232; p. 38.
Gearing, Driving or transmission. F. Burtt. No. 1,203,846; Nov. 7; Gaz. vol. 232; p. 104.
Gearing, Reversing-. H. A. Tuttle. No. 1,204,379; Nov. 7; Gaz. vol. 232; p. 287.
Gearing, Transmission-. A. J. Matheson. No. 1,203,892; Nov. 7; Gaz. vol. 232; p. 120.
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Glass-cutting machine. C. F. Lindeburg. No. 1,204,039; Nov. 7; Gaz. vol. 232; p. 171.
Glass-cylinder-capping apparatus. W. Westbury. No. 1,203,826; Nov. 7; Gaz. vol. 232; p. 97.
Grain-binder attachment. E. E. Saylor. No. 1,204,319; Nov. 7; Gaz. vol. 232; p. 266.
Grain-shocker. G. A. Durant. No. 1,204,139; Nov. 7; Gaz. vol. 232; p. 206.
Grain-shocker. G. H. Omealey. No. 1,204,183; Nov. 7; Gaz. vol. 232; p. 221.
Grinding and polishing tool, Rotary. W. Whitford. No. 1,204,102; Nov. 7; Gaz. vol. 232; p. 193.
Grinding-machine. C. Booth and A. C. Page. No. 1,203,844; Nov. 7; Gaz. vol. 232; p. 103.
Gun, Disk-throwing. R. H. Lake. No. 1,204,282; Nov. 7; Gaz. vol. 232; p. 254.
Hair-curler. E. Blackshear. No. 1,203,964; Nov. 7; Gaz. vol. 232; p. 145.
Hair-drying frame. M. W. Brubaker. No. 1,203,696; Nov. 7; Gaz. vol. 232; p. 51.
Hammock and canopy therefor. T. M. Lancaster. No. 1,204,283; Nov. 7; Gaz. vol. 232; p. 254.
Handle: *See*—
Brush and broom handle.
Handles to implements, Means for adjusting. E. M. Atkinson. No. 1,203,959; Nov. 7; Gaz. vol. 232; p. 144.
Harvester and binder, Kafir-corn. W. T. Wentz. No. 1,204,328; Nov. 7; Gaz. vol. 232; p. 269.
Harvester, Corn-. H. B. Wyckoff. No. 1,203,954; Nov. 7; Gaz. vol. 232; p. 142.
Harvesting-machine. C. Houlden. No. 1,204,356; Nov. 7; Gaz. vol. 232; p. 279.
Hat, Straw. W. Wilson. No. 1,203,672; Nov. 7; Gaz. vol. 232; p. 42.
Hay-rack. J. A. Malcik. No. 1,204,372; Nov. 7; Gaz. vol. 232; p. 285.
Headlight, Dirigible. J. T. Gilmer. No. 1,204,351; Nov. 7; Gaz. vol. 232; p. 278.
Headlight-steering mechanism. J. T. German. No. 1,204,002; Nov. 7; Gaz. vol. 232; p. 158.
Headlight-turning mechanism for vehicles. J. W. Mott. No. 1,203,769; Nov. 7; Gaz. vol. 232; p. 77.
Heater: *See*—
Chemical heater. Water-heater.
Electrical heater.

Heel, Pneumatic cushion-. O. Mussinan. No. 1,203,898; Nov. 7; Gaz. vol. 232; p. 122.
Hemp-breaking machine. W. P. Elkin. No. 1,204,260; Nov. 7; Gaz. vol. 232; p. 247.
Hoe. W. P. Thomason. No. 1,204,206; Nov. 7; Gaz. vol. 232; p. 229.
Hog-ringer. W. L. McGowan. No. 1,204,045; Nov. 7; Gaz. vol. 232; p. 173.
Hoist, Self-dumping. J. R. Walker. No. 1,204,216; Nov. 7; Gaz. vol. 232; p. 232.
Holding apparatus. C. Skidd. No. 1,204,078; Nov. 7; Gaz. vol. 232; p. 185.
Hood and scarf, Combined. S. W. Hallam and A. T. Houldsworth. No. 1,203,870; Nov. 7; Gaz. vol. 232; p. 112.
Hoop: *See*—
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Horn, Mechanical. F. H. Moyer. No. 1,204,304; Nov. 7; Gaz. vol. 232; p. 262.
Horological instrument. H. A. Borresen. No. 1,203,690; Nov. 7; Gaz. vol. 232; p. 99.
Horseshoe-calk. J. McDonough. No. 1,204,043; Nov. 7; Gaz. vol. 232; p. 172.
Horseshoe-calking machine. A. D. Cartwright and A. Baer. No. 1,203,978; Nov. 7; Gaz. vol. 232; p. 149.
Hose-coupling. F. Hachmann. No. 1,204,352; Nov. 7; Gaz. vol. 232; p. 278.
Hose-reel. E. P. Gaylord. No. 1,203,605; Nov. 7; Gaz. vol. 232; p. 18.
Hose-supporter. N. A. Newkirk. No. 1,204,376; Nov. 7; Gaz. vol. 232; p. 286.
Hub, Interchangeable wheel-. W. S. Harley. No. 1,203,612; Nov. 7; Gaz. vol. 232; p. 21.
Humidor. D. T. Oliver. No. 1,203,646; Nov. 7; Gaz. vol. 232; p. 33.
Hydraulic motor. D. W. Blunt and C. L. Kelso. No. 1,203,689; Nov. 7; Gaz. vol. 232; p. 49.
Hydrocarbon-burner. J. Millbourn. No. 1,204,051; Nov. 7; Gaz. vol. 232; p. 175.
Ice-cream-cone filler. W. Like. No. 1,204,167; Nov. 7; Gaz. vol. 232; p. 215.
Incubator and brooder, Combined. A. A. and F. B. Skinner. (Reissue.) No. 14,212; Nov. 7; Gaz. vol. 232; p. 290.
Indicator: *See*—
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Ingot-mold. C. W. Greene. No. 1,204,270; Nov. 7; Gaz. vol. 232; p. 251.
Insulation-forming machine. M. Sullivan. No. 1,203,808; Nov. 7; Gaz. vol. 232; p. 89.
Insulator adjustable support. R. W. Schulz. No. 1,204,196; Nov. 7; Gaz. vol. 232; p. 226.
Internal-combustion engine. W. H. D'Ardenne. No. 1,203,855; Nov. 7; Gaz. vol. 232; p. 107.
Internal-combustion engine. W. H. Maupin and D. R. Lobdell. No. 1,204,296; Nov. 7; Gaz. vol. 232; p. 258.
Iron ores, Gravity liquid separation of. A. J. Moxham. No. 1,203,897; Nov. 7; Gaz. vol. 232; p. 122.
Ironing-board and step-ladder, Combined. H. P. White. No. 1,204,218; Nov. 7; Gaz. vol. 232; p. 233.
Irrigating device. J. Peterson. No. 1,204,309; Nov. 7; Gaz. vol. 232; p. 263.
Jack: *See*—
Automobile-jack. Lifting-jack.
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Jack. A. L. Johnson. No. 1,204,276; Nov. 7; Gaz. vol. 232; p. 252.
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Keyboard. J. A. Schleicher and C. V. Wilgus. No. 1,203,655; Nov. 7; Gaz. vol. 232; p. 35.
Knife: *See*—
Butcher's knife.
Knife-setting gage, Planer-. A. Tomkinson. No. 1,203,814; Nov. 7; Gaz. vol. 232; p. 91.
Label-affixer. W. R. Stearns and A. H. McDermott. No. 1,203,660; Nov. 7; Gaz. vol. 232; p. 38.
Labeling-machine, Automatic bottle-feed mechanism for. F. O. Woodland. No. 1,203,676; Nov. 7; Gaz. vol. 232; p. 44.
Lace edging. M. N. Aaron. No. 1,203,561; Nov. 7; Gaz. vol. 232; p. 3.
Lace fastener, Shoe-. A. F. Urquhart. No. 1,204,212; Nov. 7; Gaz. vol. 232; p. 231.
Laminated spring. F. J. Laher. No. 1,204,037; Nov. 7; Gaz. vol. 232; p. 170.
Lamp. E. A. Hawthorne. No. 1,203,618; Nov. 7; Gaz. vol. 232; p. 23.
Lamp attachment, Table-. J. S. Clifford. No. 1,203,981; Nov. 7; Gaz. vol. 232; p. 150.
Lamp construction. L. L. Pfeifer. No. 1,204,057; Nov. 7; Gaz. vol. 232; p. 178.
Lamp, Mercury-vapor-arc. C. O. Bastian and A. E. Salisbury. No. 1,204,117; Nov. 7; Gaz. vol. 232; p. 198.
Lamp, Tail-. G. C. Barr. No. 1,203,566; Nov. 7; Gaz. vol. 232; p. 4.
Lantern-guard. R. P. Throne. No. 1,204,207; Nov. 7; Gaz. vol. 232; p. 229.
Lantern, Hand-. R. F. Schneider. No. 1,203,793; Nov. 7; Gaz. vol. 232; p. 84.
Last. W. Gordon. No. 1,203,609; Nov. 7; Gaz. vol. 232; p. 20.
Last-pulling machine. J. M. Benjamin. No. 1,203,571; Nov. 7; Gaz. vol. 232; p. 6.
Latch for elevator-doors, Safety-. J. H. Stewart. No. 1,203,931; Nov. 7; Gaz. vol. 232; p. 134.
Latch, Gate-. L. H. Zanders. No. 1,204,228; Nov. 7; Gaz. vol. 232; p. 237.
Lavatory. J. F. Kelly. No. 1,204,033; Nov. 7; Gaz. vol. 232; p. 169.
Lawn-rake, Revolving. A. E. Whiting. No. 1,204,220; Nov. 7; Gaz. vol. 232; p. 234.
Lawn-sprinkler. J. J. Miller. No. 1,204,297; Nov. 7; Gaz. vol. 232; p. 259.
Lead carbonates, Manufacturing. J. A. Schaeffer and J. R. MacGregor. No. 1,203,911; Nov. 7; Gaz. vol. 232; p. 127.
Leather rolling and embossing machine. C. Voss. No. 1,204,092; Nov. 7; Gaz. vol. 232; p. 190.
Ledger-sheet. G. R. Steele. No. 1,203,804; Nov. 7; Gaz. vol. 232; p. 88.
Lens centering and measuring instrument. G. A. H. Kellner. No. 1,204,030; Nov. 7; Gaz. vol. 232; p. 168.
Level. A. J. Cashel. No. 1,203,702; Nov. 7; Gaz. vol. 232; p. 53.
Lever-locking device. E. W. Tims and J. T. Morie. No. 1,204,272; Nov. 7; Gaz. vol. 232; p. 230.
Lever, Uncoupling-. J. R. Carmer. No. 1,203,849; Nov. 7; Gaz. vol. 232; p. 105.
Lid-raising device. T. E. Spring. No. 1,204,325; Nov. 7; Gaz. vol. 232; p. 268.
Life-saving device. E. Kreid. No. 1,203,631; Nov. 7; Gaz. vol. 232; p. 27.
Lifting device. S. E. Cowles. No. 1,203,586; Nov. 7; Gaz. vol. 232; p. 11.
Lifting-jack. X. Kirstaetter. No. 1,204,162; Nov. 7; Gaz. vol. 232; p. 213.
Lifting-jack. T. H. Wittliff and C. W. Parker. No. 1,203,673; Nov. 7; Gaz. vol. 232; p. 42.
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Light-projecting apparatus. F. A. Hardyman. No. 1,204,272; Nov. 7; Gaz. vol. 232; p. 251.
Light-rays refractor. E. G. Johanson. No. 1,204,023; Nov. 7; Gaz. vol. 232; p. 165.
Lighting-fixture. H. D. McFaddin. No. 1,204,044; Nov. 7; Gaz. vol. 232; p. 172.
Liquid-coating machine. R. A. Beausejour. No. 1,204,120; Nov. 7; Gaz. vol. 232; p. 200.
Liquid-dispensing apparatus. R. C. Bradley. No. 1,204,242; Nov. 7; Gaz. vol. 232; p. 241.
Liquid-distributer. T. W. Stringham. No. 1,203,933; Nov. 7; Gaz. vol. 232; p. 136.
Liquid-fuel burner. J. C. Lockhart. No. 1,204,288; Nov. 7; Gaz. vol. 232; p. 255.
Lithographic plate. S. A. Neidich. No. 1,203,770; Nov. 7; Gaz. vol. 232; p. 77.
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Locomotive. W. F. Kiesel, Jr. No. 1,204,036; Nov. 7; Gaz. vol. 232; p. 170.
Locomotive, Electric. J. H. Flory. No. 1,203,999; Nov. 7; Gaz. vol. 232; p. 157.
Loom shuttle, Weft-replenishing-. E. S. Stimpson. No. 1,204,084; Nov. 7; Gaz. vol. 232; p. 188.
Looms, Thread-cutting temple for. W. R. Widdup. No. 1,203,828; Nov. 7; Gaz. vol. 232; p. 97.
Lubricator. J. W. Eviston. No. 1,204,145; Nov. 7; Gaz. vol. 232; p. 207.
Lumber-edging machine. W. H. Trout. No. 1,203,940; Nov. 7; Gaz. vol. 232; p. 137.
Machine-guard. A. Weins and J. H. P. J. Roesler. No. 1,203,668; Nov. 7; Gaz. vol. 232; p. 41.
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Mail-box and milk-bottle holder, Combined. J. Gonsior, W. Frank, and C. Schneider. No. 1,204,268; Nov. 7; Gaz. vol. 232; p. 250.
Mask, Base-ball. S. C. April. No. 1,203,564; Nov. 7; Gaz. vol. 232; p. 4.
Match-box. G. Rietveld. No. 1,203,787; Nov. 7; Gaz. vol. 232; p. 82.
Match-holder. S. M. Friede. No. 1,203,867; Nov. 7; Gaz. vol. 232; p. 111.
Match-packing machines, Automatic stopping and starting mechanism for. M. Paridon. No. 1,203,906; Nov. 7; Gaz. vol. 232; p. 125.
Measuring device, Liquid-. P. B. Sprague. No. 1,204,324; Nov. 7; Gaz. vol. 232; p. 268.
Mechanical movement. F. Schafer. No. 1,203,913; Nov. 7; Gaz. vol. 232; p. 127.
Mechanical movement. F. Schafer. No. 1,203,914; Nov. 7; Gaz. vol. 232; p. 127.
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Metal, Ornamenting. G. J. Glotzbach. No. 1,204,005; Nov. 7; Gaz. vol. 232; p. 159.
Metal sheet for acoustic purposes and making same. P. A. Waller. No. 1,204,096; Nov. 7; Gaz. vol. 232; p. 191.
Metal tie. P. Kerze. No. 1,204,279; Nov. 7; Gaz. vol. 232; p. 253.

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Milk dispenser, Malted-. A. L. Anderson. No. 1,204,111; Nov. 7; Gaz. vol. 232; p. 196.
Milking-machines, Releaser installation of. T. N. Fletcher. No. 1,203,998; Nov. 7; Gaz. vol. 232; p. 156.
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Rolling-mill.
Milling and routing machine. F. Davies. No. 1,203,708; Nov. 7; Gaz. vol. 232; p. 56.
Mining-machine. S. P. C. Borson. No. 1,203,573; Nov. 7; Gaz. vol. 232; p. 7.
Mixer. F. Myers. No. 1,203,899; Nov. 7; Gaz. vol. 232; p. 122.
Mixing-machine. F. A. Connolly. No. 1,204,343; Nov. 7; Gaz. vol. 232; p. 275.
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Motion-converting device. G. Anderson. No. 1,203,563; Nov. 7; Gaz. vol. 232; p. 3.
Motor: *See*—
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Mouthpieces, Sanitary attachment for. H. B. Park. No. 1,204,307; Nov. 7; Gaz. vol. 232; p. 262.
Mowing-machine. F. S. Mannon. No. 1,203,890; Nov. 7; Gaz. vol. 232; p. 120.
Muffler. C. M. Peterson. No. 1,203,777; Nov. 7; Gaz. vol. 232; p. 79.
Multiple blast-burner. W. W. Kemp and W. H. Van Horn. No. 1,204,359; Nov. 7; Gaz. vol. 232; p. 280.
Music-leaf turner. S. Slater. No. 1,204,080; Nov. 7; Gaz. vol. 232; p. 186.
Music stand and case, Combined. C. M. Engebretson. No. 1,203,864; Nov. 7; Gaz vol. 232; p. 110.
Musical instruments, Illuminating device for. R. L. Tate. No. 1,204,205; Nov. 7; Gaz. vol. 232; p. 229.
Musical instruments, Pallet for air-operated. A. A. Page. No. 1,203,775; Nov. 7; Gaz. vol. 232; p. 79.
Musical instruments, Pneumatically-variable tension-regulators for A. and O. Philipps. No. 1,204,310; Nov. 7; Gaz. vol. 232; p. 263.
Napkins, Machine for manufacturing sanitary. G. H. Hardman. No. 1,204,153; Nov. 7; Gaz. vol. 232; p. 210.
Nippers and handcuffs combined, Policeman's. G. W. Pratt. No. 1,203,778; Nov. 7; Gaz. vol. 232; p. 79.
Nitrate of lime and similar substances without dephlegmation and dust, Granulating. A. Holter. No. 1,203,740; Nov. 7; Gaz. vol. 232; p. 66.
Nose-bag, Horse. W. H. Cooper. No. 1,204,250; Nov. 7; Gaz. vol. 232; p. 144.
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Oilless spindle. L. S. Bache. No. 1,204,115; Nov. 7; Gaz. vol. 232; p. 198.
Ore-roasting furnace. J. Harris. No. 1,302,613; Nov. 7; Gaz. vol. 232; p. 21.
Ore treatment, Agitator for. C. Robinson. No. 1,204,069; Nov. 7; Gaz. vol. 232; p. 182.
Organ-bellows. G. C. Wick. No. 1,204,103; Nov. 7; Gaz. vol. 232; p. 194.
Organ key mechanism. R. Hope-Jones. No. 1,203,621; Nov. 7; Gaz. vol. 232; p. 24.
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Orthodontic appliance. E. H. Angle. No. 1,204,114; Nov. 7; Gaz. vol. 232; p. 198.
Oven, Electric baker's. E. H. Ruckle. No. 1,203,909; Nov. 7; Gaz. vol. 232; p. 126.
Overshoe. C. W. MacWilliams. No. 1,204,293; Nov. 7; Gaz. vol. 232; p. 258.
Pail, Dinner-. J. L. Ogden, Jr. No. 1,203,774; Nov. 7; Gaz. vol. 232; p. 78.
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Paper-board, Joint for corrugated. E. M. Hawkins. No. 1,203,616; Nov. 7; Gaz. vol. 232; p. 22.
Paper-roll holder. J. J. Currie. No. 1,203,588; Nov. 7; Gaz. vol. 232; p. 12.
Paper vessel. G. W. Beadle. No. 1,203,569; Nov. 7; Gaz. vol. 232; p. 5.
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Fence-post.
Posts, Wire-fastener for. P. F. Butzer. No. 1,204,126; Nov. 7; Gaz. vol. 232; p. 201.
Pot-filling apparatus. J. W. Cruikshank. No. 1,204,252; Nov. 7; Gaz. vol. 232; p. 245.
Pot-lid receptacle. J. J. Dalton. No. 1,204,344; Nov. 7; Gaz. vol. 232; p. 275.
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Powder-blending machine. A. K. Kusebauch. No. 1,204,163; Nov. 7; Gaz. vol. 232; p. 214.
Powder compounds, Manufacture of blended. W. Dalton. No. 1,204,137; Nov. 7; Gaz. vol. 232; p. 205.
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Photographic-printing press.
Press. O. F. Westenhiser. No. 1,203,946; Nov. 7; Gaz. vol. 232; p. 139.
Presses, Braking mechanism for. H. A. W. Wood. No. 1,203,951; Nov. 7; Gaz. vol. 232; p. 141.
Pressing machine, Steam-. M. M. Kane. No. 1,203,880; Nov. 7; Gaz. vol. 232; p. 116.
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Projector. C. W. and L. R. White. No. 1,204,100; Nov. 7; Gaz. vol. 232; p. 193.

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Pulverizer. F. B. Franks. No. 1,204,385; Nov. 7; Gaz. vol. 232; p. 289.
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Pump, Centrifugal air-. P. A. Bancel. No. 1,203,841; Nov. 7; Gaz. vol. 232; p. 102.
Pump, engine, and the like. J. Zwicky. No. 1,203,682; Nov. 7; Gaz. vol. 232; p. 46.
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Pump for wells, Sand-. L. L. Richard. No. 1,203,784; Nov. 7; Gaz. vol. 232; p. 82.
Pump-rod packing. B. W. Goodsell. No. 1,204,007; Nov. 7; Gaz. vol. 232; p. 159.
Pump, Sanitary milk-. K. D. Smith. No. 1,203,923; Nov. 7; Gaz. vol. 232; p. 130.
Pump, Variable-feed. G. D. Pogue. No. 1,204,062; Nov. 7; Gaz. vol. 232; p. 179.
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Purse or tobacco-bag, Cash-. B. Robin and J. Caplin. No. 1,204,068; Nov. 7; Gaz. vol. 232; p. 182.
Puzzle. A. I. Mitchell. No. 1,204,382; Nov. 7; Gaz. vol. 232; p. 288.
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Display-rack. Hay-rack.
Radiator. O. J. Hartfield. No. 1,203,731; Nov. 7; Gaz. vol. 232; p. 62.
Radiators, Individual thermostatic controller for. E. S. Halsey. No. 1,204,386; Nov. 7; Gaz. vol. 232; p. 290.
Rail-joint, Insulated. B. G. Braine. No. 1,204,124; Nov. 7; Gaz. vol. 232; p. 201.
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Railway-mail-exchange apparatus. A. Hupp. No. 1,203,623; Nov. 7; Gaz. vol. 232; p. 25.
Railway-track construction. H. E. and A. L. Scott. No. 1,204,198; Nov. 7; Gaz. vol. 232; p. 226.
Range top, Gas-. L. Garrison. No. 1,204,266; Nov. 7; Gaz. vol. 232; p. 249.
Ratchet-drill. J. M. Sherman. No. 1,204,199; Nov. 7; Gaz. vol. 232; p. 227.
Ratchet-wrench. C. J. Wallen. No. 1,204,095; Nov. 7; Gaz. vol. 232; p. 191.
Ratchet-wrench, Reversible. C. Baker. No. 1,203,685; Nov. 7; Gaz. vol. 232; p. 48.
Razor-strop hone, Combination. K. Brächer, Jr. No. 1,203,691; Nov. 7; Gaz. vol. 232; p. 50.
Receptacle-closure. J. Wagner. No. 1,204,093; Nov. 7; Gaz. vol. 232; p. 191.
Receptacle-cover. L. J. Davis. No. 1,203,987; Nov. 7; Gaz. vol. 232; p. 152.
Recorder: *See*—
Signal-recorder.
Reel: *See*—
Hose-reel.
Reel-holder. J. P. Weaver. No. 1,204,217; Nov. 7; Gaz. vol. 232; p. 233.
Refrigerating apparatus. B. and J. B. Plekenpol. No. 1,204,061; Nov. 7; Gaz. vol. 232; p. 179.
Refrigerator. V. A. De Canio. No. 1,204,347; Nov. 7; Gaz. vol. 232; p. 276.
Refuse-tank. H. T. Cronk. No. 1,203,707; Nov. 7; Gaz. vol. 232; p. 55.
Resilient bolt. E. I. Dodds. No. 1,204,254; Nov. 7; Gaz. vol. 232; p. 245.
Resilient wheel. G. W. Thompson. No. 1,203,939; Nov. 7; Gaz. vol. 232; p. 137.
Resilient wheel. C. L. Wolfe. No. 1,203,674; Nov. 7; Gaz. vol. 232; p. 43.
Rheostat. L. L. Tatum. No. 1,203,810; Nov. 7; Gaz. vol. 232; p. 90.
Rim, Sectional. G. T. Fielding. No. 1,203,996; Nov. 7; Gaz. vol. 232; p. 156.
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Piston-ring. Spinning-ring.
Ring-slot-testing device. C. E. Johnson. No. 1,204,026; Nov. 7; Gaz. vol. 232; p. 166.
Robe-holder. E. L. Swikard. No. 1,203,809; Nov. 7; Gaz. vol. 232; p. 90.
Rolling-mill, Continuous. J. B. McKibbin. No. 1,203,888; Nov. 7; Gaz. vol. 232; p. 119.
Roof batten, Sheet-metal board-. D. E. Shrauger. No. 1,204,200; Nov. 7; Gaz. vol. 232; p. 227.
Roof, Self-supporting-tile. H. R. Straight. No. 1,203,933; Nov. 7; Gaz. vol. 232; p. 135.
Roofing and flooring, Process and means for the manufacture of waterproof and expansive. I. Egger and C. Gartenmann. No. 1,204,259; Nov. 7; Gaz. vol. 232; p. 247.
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Rope-grip. J. C. Doust. No. 1,203,715; Nov. 7; Gaz. vol. 232; p. 57.
Rosin sizing composition. J. A. De Cew. No. 1,203,857; Nov. 7; Gaz. vol. 232; p. 108.
Rotatable table, book-shelf, and lamp-support, Combined. S. D. Trinkl. No. 1,203,818; Nov. 7; Gaz. vol. 232; p. 93.
Rough-ring-testing appliance. C. E. Johnson. No. 1,204,027; Nov. 7; Gaz. vol. 232; p. 166.
Safety appliance. J. W. Ellis. No. 1,204,144; Nov. 7; Gaz. vol. 232; p. 207.
Sales-book, Manifolding. G. E. Doughty. No. 1,204,384; Nov. 7; Gaz. vol. 232; p. 289.
Sanitary screen. F. Granger. No. 1,203,868; Nov. 7; Gaz. vol. 232; p. 112.
Sash-lock. A. C. Christenson. No. 1,203,850; Nov. 7; Gaz. vol. 232; p. 105.
Saw-holder. M. Clarke. No. 1,203,980; Nov. 7; Gaz. vol. 232; p. 150.
Saw tool, Crosscut-. S. T. Freas. No. 1,204,264; Nov. 7; Gaz. vol. 232; p. 248.
Saw, Wheelbarrow-. A. R. Gano. No. 1,203,725; Nov. 7; Gaz. vol. 231; p. 61.
Sawing-machine for halving carcasses. D. Davey and H. Maison. No. 1,204,345; Nov. 7; Gaz. vol. 232; p. 275.
Scale. C. H. Hapgood. No. 1,203,611; Nov. 7; Gaz. vol. 232; p. 20.
Scale. J. M. Triner. No. 1,203,817; Nov. 7; Gaz. vol. 232; p. 93.
Scale, Weighing-. C. A. Becker. No. 1,203,686; Nov. 7; Gaz. vol. 232; p. 48.
Scraper. V. Strubhar. No. 1,203,936; Nov. 7; Gaz. vol. 232; p. 136.
Scraping-blades, Supporting mechanism for. J. P. Offerman. No. 1,204,306; Nov. 7; Gaz. vol. 232; p. 262.
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Sanitary screen. Window-screen.
Screen-attaching device, Rolling-window-. M. G. Bunnell. No. 1,203,973; Nov. 7; Gaz. vol. 232; p. 147.
Screw-thread-rolling machine. W. L. Kerlin. No. 1,204,035; Nov. 7; Gaz. vol. 232; p. 169.
Seam. J. E. McLaughlin. No. 1,204,046; Nov. 7; Gaz. vol. 232; p. 173.
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Vehicle auxiliary seat.
Seeding-machine. H. B. Bozard. No. 1,204,239; Nov. 7; Gaz. vol. 232; p. 240.
Seeding-machine scraper. H. B. Bozard. No. 1,204,240; Nov. 7; Gaz. vol. 232; p. 240.
Sewing-machine and folding attachment therefor. G. W. Eberley. No. 1,204,258; Nov. 7; Gaz. vol. 232; p. 246.
Sewing-machine attachment, Shoe-. E. N. Andrews. No. 1,203,838; Nov. 7; Gaz. vol. 232; p. 100.
Sewing-machine fan attachment. L. D. Corey. No. 1,203,984; Nov. 7; Gaz. vol. 232; p. 152.
Sewing-machine needle-clamp. J. R. Moffatt. No. 1,203,895; Nov. 7; Gaz. vol. 232; p. 121.
Sewing-machine thread-guide. H. T. Werden. No. 1,203,945; Nov. 7; Gaz. vol. 232; p. 139.
Shade-carrier. H. G. Dewey and O. D. Green. No. 1,203,593; Nov. 7; Gaz. vol. 232; p. 14.
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Shading-machine. W. H. Margetts. No. 1,203,761; Nov. 7; Gaz. vol. 232; p. 74.
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Sheet-lifting mechanism. H. Steinmetz. No. 1,203,930; Nov. 7; Gaz. vol. 232; p. 134.
Shelving, Metal. C. L. C. Magee. No. 1,204,174; Nov. 7; Gaz. vol. 232; p. 218.
Shield, Bullet-proof. A. Schwarz. No. 1,203,916; Nov. 7; Gaz. vol. 232; p. 128.
Shock-absorber. J. Dieringer. No. 1,203,711; Nov. 7; Gaz. vol. 232; p. 57.
Shock-absorber. H. L. Kimmell. No. 1,204,361; Nov. 7; Gaz. vol. 232; p. 281.
Shock-absorber connection. R. S. Carter. No. 1,203,580; Nov. 7; Gaz. vol. 232; p. 9.
Shock-absorber, Recoil. H. F. Diercks. No. 1,204,253; Nov. 7; Gaz. vol. 232; p. 245.
Shoe-tree, Foldable. W. R. Buxton. No. 1,203,700; Nov 7; Gaz. vol. 232; p. 53.
Shoe-ventilator. R. F. Brower. No. 1,203,694; Nov. 7; Gaz. vol. 232; p. 51.
Shortening composition. R. T Paessler. No. 1,203,905; Nov. 7; Gaz. vol. 232; p. 125.
Shutter and roller-blind shutter, Focal-plane. E. Hora. No. 1,204,154; Nov. 7; Gaz. vol. 232; p. 210.
Shutter, Thermal-controlled. E. Cahill. No. 1,203,847; Nov. 7; Gaz. vol. 232; p. 104.
Sickle-bar holder. A. Martinson. No. 1,204,295; Nov. 7; Gaz. vol. 232; p. 258.
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Cab-signal.
Sifter, Ash-. J. G. King. No. 1,203,881; Nov. 7; Gaz. vol. 232; p. 117.
Sign, Electric. C. A. Chase. No. 1,203,582; Nov. 7; Gaz. vol. 232; p. 10.
Signal-box. L. J. Voorhees. No. 1,204,215; Nov. 7; Gaz. vol. 232; p. 232.
Signal device. A. L. W. Plugge. No. 1,204,311; Nov. 7; Gaz. vol. 232; p. 264.
Signal-recorder. L. J. Voorhees. No. 1,204,214; Nov. 7; Gaz. vol. 232; p. 231.
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Silverware-polisher. J. Nystrand. No. 1,203,903; Nov. 7; Gaz. vol. 232; p. 124.
Slide-presenting machine. W. C. Johnson. No. 1,203,744; Nov. 7; Gaz. vol. 232; p. 68.
Snap or catch. S. Anderson. No. 1,203,958; Nov. 7; Gaz. vol. 232; p. 143.
Snap-switch. M. Guett. No. 1,204,012; Nov. 7; Gaz. vol. 232; p. 161.
Soldering apparatus. J. G. Clemens. No. 1,204,131; Nov. 7; Gaz. vol. 232; p. 203.
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Sound-box. L. K. Scotford. No. 1,204,197; Nov. 7; Gaz. vol. 232; p. 226.
Spark-plug pressure-indicator. E. Hanni. No. 1,204,013; Nov. 7; Gaz. vol. 232; p. 161.
Spark-plug protector and cleaner. E. G. Ware. No. 1,203,943; Nov. 7; Gaz. vol. 232; p. 138.
Spectacles. F. W. King. No. 1,204,161; Nov. 7; Gaz. vol. 232; p. 213.
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Spinning-ring, Rotary. S. S. Dearborn. No. 1,204,346; Nov. 7; Gaz. vol. 232; p. 276.
Spinning, winding, or doubling machines, Take-up mechanism for. E. E. Bradley. No. 1,204,123; Nov. 7; Gaz. vol. 232; p. 201.
Splitting-machine. C. Letin. No. 1,203,753; Nov. 7; Gaz. vol. 232; p. 71.
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Spring-wheel. S. D. Chapman. No. 1,204,340; Nov. 7; Gaz. vol. 232; p. 274.
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Sprinkler systems, Alarm-controlling means for. N. H. Suren. No. 1,204,327; Nov. 7; Gaz. vol. 232; p. 269.
Sputum-cup, Pocket. W. M. Garrison. No. 1,203,604; Nov. 7; Gaz. vol. 232; p. 18.
Stamp-affixing machine. B. D. Straight. No. 1,203,932; Nov. 7; Gaz. vol. 232; p. 135.
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Music-stand. Wire-holding stand.
Steam-trap. J. H. Mailhot. No. 1,203,639; Nov. 7; Gaz. vol. 232; p. 30.
Steering-gear. W. F. Dubert. No. 1,204,138; Nov. 7; Gaz. vol. 232; p. 205.
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Stoker, Mechanical. W. T. Hanna. No. 1,203,871; Nov. 7; Gaz. vol. 232; p. 113.
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Stove. H. P. G. Norstrand. No. 1,203,772; Nov. 7; Gaz. vol. 232; p. 78.
Stove, Combined coal and gas. C. D. Carter and G. F. Bibb. No. 1,204,130; Nov. 7; Gaz. vol. 232; p. 203.
Straw-carrier, Vibratory. J. A. Malm. No. 1,203,760; Nov. 7; Gaz. vol. 232; p. 73.
Street-sweeping machine. J. A. Schroeder. No. 1,204,320; Nov. 7; Gaz. vol. 232; p. 267.
Subirrigation device. P. Schwarz and W. J. Baker. No. 1,203,794; Nov. 7; Gaz. vol. 232; p. 85.
Sugar-mills, Means for conveying macerated bagasse between. W. A. Ramsay. No. 1,204,314; Nov. 7; Gaz. vol. 232; p. 265.
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Sulfuric anhydrid and catalyzer therefor, Making. C. Ellis. No. 1,204,141; Nov. 7; Gaz. vol. 232; p. 206.
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Surprise and alarm device. J. L. Kellogg. No. 1,204,031; Nov. 7; Gaz. vol. 232; p. 168.
Suspenders. C. L. Molloy. No. 1,203,643; Nov. 7; Gaz. vol. 232; p. 32.
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Electrical switch.
Switch and box lock, Combined. J. H. McClure. No. 1,204,042; Nov. 7; Gaz. vol. 232; p. 172.
Switch-stand, Interlocking and target-operating. F. C. Anderson. No. 1,204,112; Nov. 7; Gaz. vol. 232; p. 197.
Synchronizing. C. A. Lohr. No. 1,204,169; Nov. 7; Gaz. vol. 232; p. 216.
Syringe, Vaginal. L. T. Speers. No. 1,203,803; Nov. 7; Gaz. vol. 232; p. 88.
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Table-top, Supplemental. E. J. Le Claire. No. 1,203,752; Nov. 7; Gaz. vol. 232; p. 71.
Tablet, Extensible. T. J. Norton. No. 1,204,181; Nov. 7; Gaz. vol. 232; p. 221.
Tackling-dummy. F. A. Hinkey. No. 1,204,017; Nov. 7; Gaz. vol. 232; p. 163.
Tag, Shipping-. R. M. Nichols. No. 1,203,902; Nov. 7; Gaz. vol. 232; p. 124.
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Tanks, Surface discharge apparatus for. R. A. Brooks. No. 1,203,578; Nov. 7; Gaz. vol. 232; p. 8.
Tap or die, Collapsible. R. C. Lewis. No. 1,203,884; Nov. 7; Gaz. vol. 232; p. 117.
Telephone appliance. J. L. Creveling. No. 1,204,136; Nov. 7; Gaz. vol. 232; p. 205.
Telephone-exchange system. L. H. Johnson. No. 1,203,742; Nov. 7; Gaz. vol. 232; p. 67.
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Tent-frame, Collapsible. J. E. Wilkins. No. 1,204,329; Nov. 7; Gaz. vol. 232; p. 270.
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Threshing-machine. G. W. Rivers. No. 1,204,191; Nov. 7; Gaz. vol. 232; p. 224.
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Tie-clasp. J. E. Sarphie. No. 1,204,075; Nov. 7; Gaz. vol. 232; p. 185.
Tiles, roof-sheets, and the like. E. R. Sutcliffe. No. 1,204,086; Nov. 7; Gaz. vol. 232; p. 189.
Tiles, roof-sheets, and the like, Manufacture of. E. R. Sutcliffe. No. 1,204,085; Nov. 7; Gaz. vol. 232; p. 188.
Time-controlled apparatus. A. G. Hatch and F. Waldorf. No. 1,203,873; Nov. 7; Gaz. vol. 232; p. 113.
Tire-armor. S. T. Culp. No. 1,203,985; Nov. 7; Gaz. vol. 232; p. 152.
Tire-carrying rim. E. Hopkinson. No. 1,204,019; Nov. 7; Gaz. vol. 232; p. 163.
Tire-inflating device, Pneumatic-. A. Anderson. No. 1,204,232; Nov. 7; Gaz. vol. 232; p. 238.
Tire, Replaceable-tread vehicle-. O. Zarth. No. 1,204,109; Nov. 7; Gaz. vol. 232; p. 195.
Tire-securing means, Vehicle-. M. C. Overman. No. 1,203,648; Nov. 7; Gaz. vol. 232; p. 33.
Tire, Vehicle-. A. J. Savage. No. 1,203,910; Nov. 7; Gaz. vol. 232; p. 126.
Tire, Vehicle-wheel. E. Schmitt. No. 1,203,915; Nov. 7; Gaz. vol. 232; p. 128.
Tires, &c., Composition for treating rubber. D. G. Elder. No. 1,203,720; Nov. 7; Gaz. vol. 232; p. 59.
Tires, Inner tube for pneumatic. L. R. Schaap. No. 1,203,654; Nov. 7; Gaz. vol. 232; p. 35.
Toll-trunk circuit. C. S. Winston. No. 1,203,950; Nov. 7; Gaz. vol. 232; p. 140.
Tongue-support for vehicles. E. Breitenstein. No. 1,204,243; Nov. 7; Gaz. vol. 232; p. 242.
Tool. J. W. Ferguson. No. 1,204,147; Nov. 7; Gaz. vol. 232; p. 208.
Tool. S. F. Legg. No. 1,204,165; Nov. 7; Gaz. vol. 232; p. 215.
Tool, Extensible. C. Contal. No. 1,203,853; Nov. 7; Gaz. vol. 232; p. 107.
Tool-holder. J. F. Slavik. No. 1,203,799; Nov. 7; Gaz. vol. 232; p. 87.
Tool-holder. E. M. Smith. No. 1,203,921; Nov. 7; Gaz. vol. 232; p. 130.
Tooth-crowns, Apparatus for making artificial. S. A. Levin. No. 1,204,166; Nov. 7; Gaz. vol. 232; p. 215.
Toothpick-holder, Sanitary. O. and G. Lamothe. No. 1,204,364; Nov. 7; Gaz. vol. 232; p. 282.
Torpedo-tube for submarines or the like. M. F. Hay and G. Ekama. No. 1,204,353; Nov. 7; Gaz. vol. 232; p. 278.
Toy. J. G. Clemens. No. 1,204,132; Nov. 7; Gaz. vol. 232; p. 203.
Toy, Advertising. B. S. Bowers. No. 1,203,967; Nov. 7; Gaz. vol. 232; p. 145.
Trace. C. J. Cooper. No. 1,203,854; Nov. 7; Gaz. vol. 232; p. 107.
Track-cleaner. G. B. Begg. No. 1,204,236; Nov. 7; Gaz. vol. 232; p. 239.
Tractor. J. N. Moody. No. 1,204,299; Nov. 7; Gaz. vol. 232; p. 259.
Train-check holder. A. L. Frail. No. 1,203,599; Nov. 7; Gaz. vol. 232; p. 16.
Train-stop, Automatic. C. H. Buhl. No. 1,203,845; Nov. 7; Gaz. vol. 232; p. 103.

Train-stop, Automatic. M. B. Bulla. No. 1,203,969; Nov. 7; Gaz. vol. 232; p. 146.
Train-stop, Automatic. M. B. Bulla. No. 1,203,970; Nov. 7; Gaz. vol. 232; p. 146.
Transmission mechanism. P. W. Ennis. No. 1,203,992; Nov. 7; Gaz. vol. 232; p. 154.
Trap: *See*—
Animal-trap. Steam-trap.
Treadle starting mechanism for machines. M. Vander Sluys. No. 1,203,658; Nov. 7; Gaz. vol. 232; p. 37.
Tree: *See*—
Shoe-tree.
Truck. H. P. J. Earnshaw. No. 1,203,861; Nov. 7; Gaz. vol. 232; p. 109.
Truck, Automobile-. R. S. Maxwell. No. 1,204,049; Nov. 7; Gaz. vol. 232; p. 175.
Truck, Delivery-. G. D. Carpenter. No. 1,203,977; Nov. 7; Gaz. vol. 232; p. 149.
Tube-coupling device. H. A. Koenig. No. 1,203,630; Nov. 7; Gaz. vol. 232; p. 27.
Trough: *See*—
Dough-trough.
Tube: *See*—
Drinking-tube. Torpedo-tube.
Tube-wrapping machine. J. A. Vey. No. 1,204,213; Nov. 7; Gaz. vol. 232; p. 231.
Tubing, Repair for. W. X. Bruns. No. 1,204,244; Nov. 7; Gaz. vol. 232; p. 242.
Type-setting machine. W. Wright. No. 1,203,677; Nov. 7; Gaz. vol. 232; p. 44.
Type-setting machine. W. Wright. No. 1,203,679; Nov. 7; Gaz. vol. 232; p. 45.
Type-setting machine. W. Wright. No. 1,203,680; Nov. 7; Gaz. vol. 232; p. 46.
Type-writers, Calculating attachment for. O. A. Dietsche. No. 1,203,868; Nov. 7; Gaz. vol. 232; p. 108.
Type-writers, Key-top for. R. E. Beaubien. No. 1,203,570; Nov. 7; Gaz. vol. 232; p. 5.
Type-writing and computing machine, Combined. G. O. Degener and E. Saunders. No. 1,203,988; Nov. 7; Gaz. vol. 232; p. 153.
Type-writing machine. J. Alexander. No. 1,203,836; Nov. 7; Gaz. vol. 232; p. 99.
Type-writing machine. N. H. Anderson. No. 1,203,683; Nov. 7; Gaz. vol. 232; p. 47.
Type-writing machine. A. G. F. Kurowski. No. 1,203,632; Nov. 7; Gaz. vol. 232; p. 28.
Type-writing machine. A. G. F. Kurowski. No. 1,203,633; Nov. 7; Gaz. vol. 232; p. 28.
Type-writing machine. L. R. Roberts. No. 1,204,192; Nov. 7; Gaz. vol. 232; p. 224.
Type-writing machine. G. A. Seib. No. 1,203,795; Nov. 7; Gaz. vol. 232; p. 85.
Type-writing machine. J. H. Sheckler. No. 1,203,657; Nov. 7; Gaz. vol. 232; p. 36.
Typewriting machine. B. C. Stickney. No. 1,204,202; Nov. 7; Gaz. vol. 232; p. 228.
Type-writing machine. B. C. Stickney. No. 1,204,326; Nov. 7; Gaz. vol. 232; p. 268.
Type-writing machine. W. Wright. No. 1,203,953; Nov. 7; Gaz. vol. 232; p. 142.
Type-writing-machine copy-holder. J. J. Cooper. No. 1,203,585; Nov. 7; Gaz. vol. 232; p. 11.
Type-writing-machine key and type-bar action. J. Alexander. No. 1,203,837; Nov. 7; Gaz. vol. 232; p. 100.
Universal joint. B. O. Rhodes. No. 1,204,190; Nov. 7; Gaz. vol. 232; p. 223.
Unloading apparatus. A. J. Holt. No. 1,203,620; Nov. 7; Gaz. vol. 232; p. 24.
Vacuum-breaker. H. E. Morton. No. 1,204,301; Nov. 7; Gaz. vol. 232; p. 260.
Vacuum-breaker. H. E. Morton. No. 1,204,302; Nov. 7; Gaz. vol. 232; p. 261.
Vacuum-breaker and non-return valve, Combined. H. E. Morton. No. 1,204,303; Nov. 7; Gaz. vol. 232; p. 261.
Valve. H. G. Freeman. No. 1,204,765; Nov. 7; Gaz. vol. 232; p. 249.
Valve. G. O. Miller. No. 1,203,766; Nov. 7; Gaz. vol. 232; p. 75.
Valve. R. H. Thorne. No. 1,204,087; Nov. 7; Gaz. vol. 232; p. 189.
Valve-actuating mechanism, Flush-tank-. W. U. Griffiths. No. 1,203,726; Nov. 7; Gaz. vol. 232; p. 61.
Valve-actuating mechanism for fluid-pressure motors. T. W. Nichols. No. 1,203,645; Nov. 7; Gaz. vol. 232; p. 32.
Valve, Flush-. T. J. Cahill. No. 1,204,338; Nov. 7; Gaz. vol. 232; p. 273.
Valve for internal-combustion engines, Air-. W. Aird. No. 1,204,110; Nov. 7; Gaz. vol. 232; p. 196.
Valve, Mixing-. E. Madden. No. 1,204,047; Nov. 7; Gaz. vol. 232; p. 174.
Valve, Mixing-. E. J. Sieber. No. 1,203,798; Nov. 7; Gaz. vol. 232; p. 86.
Valve, Stop-. W. Renner. No. 1,204,316; Nov. 7; Gaz. Nov. 7; p. 29.
Valve, Tender-tank. J. J. Wing. No. 1,204,106; Nov. 7; Gaz. vol. 232; p. 195.
Valve, Tender-tank. W. E. Woodard. No. 1,204,108; Nov. 7; Gaz. vol. 232; p. 195.
Valve, Train-pipe. D. C. Mitchell. No. 1,204,176; Nov. 7; Gaz. vol. 232; p. 219.
Vehicle and the like top. M. Buch. No. 1,204,337; Nov. 7; Gaz. vol. 232; p. 272.
Vehicle, Armored. D. H. Bellamore. No. 1,203,962; Nov. 7; Gaz. vol. 232; p. 144.
Vehicle auxiliary seat. M. J. Hammers. No. 1,203,729; Nov. 7; Gaz. vol. 232; p. 62.
Vehicle-body, Delivery. R. E. Greene. No. 1,204,271; Nov. 7; Gaz. vol. 232; p. 251.
Vehicle-brake. P. Giba. No. 1,204,267; Nov. 7; Gaz. vol. 232; p. 249.
Vehicle-brake. R. F. Walter. No. 1,204,097; Nov. 7; Gaz. vol. 232; p. 191.
Vehicle driving mechanism. W. Luxmore. No. 1,203,638; Nov. 7; Gaz. vol. 232; p. 29.
Vehicle-guard. B. F. Cone. No. 1,203,706; Nov. 7; Gaz. vol. 232; p. 55.
Vehicle, Motor-. E. Gruenfeldt. No. 1,203,727; Nov. 7; Gaz. vol. 232; p. 61.
Vehicle-signal. A. S. Perry. No. 1,204,186; Nov. 7; Gaz. vol. 232; p. 222.
Vehicle-spring. M. P. Gillen. No. 1,204,003; Nov. 7; Gaz. vol. 232; p. 158.
Vehicle steering-gear, Motor-. G. R. Rosenberg. No. 1,204,193; Nov. 7; Gaz. vol. 232; p. 225.
Vehicle-top. W. B. Goodwin. No. 1,204,008; Nov. 7; Gaz. vol. 232; p. 159.
Vehicle-wheel. L. W. Thorp. No. 1,203,813; Nov. 7; Gaz. vol. 232; p. 91.
Vehicles, Convertible box and coaster body for. J. H. Wittman. No. 1,203,831; Nov. 7; Gaz. vol. 232; p. 98.
Vehicles, Driving of road-. J. G. P. Thomas. No. 1,203,663; Nov. 7; Gaz. vol. 232; p. 39.
Vehicles, Driving of road and rail. J. G. P. Thomas. No. 1,203,664; Nov. 7; Gaz. vol. 232; p. 39.
Vehicles, Folding standard for. E. J. Huffman. No. 1,203,622; Nov. 7; Gaz. vol. 232; p. 24.
Ventilating duct, Wall-. C. C. Shipp. No. 1,204,321; Nov. 7; Gaz. vol. 232; p. 267.
Ventilator: *See*—
Shoe-ventilator. Window-ventilator.
Vest and petticoat, Combined. L. Nahabedian. No. 1,204,054; Nov. 7; Gaz. vol. 232; p. 177.
Vulcanization. A. O. Bourn. No. 1,203,966; Nov. 7; Gaz. vol. 232; p. 145.
Vulcanizer, Portable. E. T. Horsey. No. 1,204,021; Nov. 7; Gaz. vol. 232; p. 164.
Vulcanizing. H. R. Murdock. No. 1,204,374; Nov. 7; Gaz. vol. 232; p. 285.
Washboard-clamp. A. Coll. No. 1,204,133; Nov. 7; Gaz. vol. 232; p. 204.
Washboard-protector. F. W. Becker. No. 1,204,335; Nov. 7; Gaz. vol. 232; p. 272.
Washboiler. J. T. Lucas. No. 1,204,369; Nov. 7; Gaz. vol. 232; p. 283.
Washing-machine gearing device. G. W. Lewis. No. 1,203,883; Nov. 7; Gaz. vol. 232; p. 117.
Watch backs and bezels, Making. G. F. Eberhard. No. 1,204,257; Nov. 7; Gaz. vol. 232; p. 246.
Watchcase. A. S. Stark. No. 1,204,082; Nov. 7; Gaz. vol. 232; p. 187.
Water-closet. H. S. Maddock. No. 1,204,048; Nov. 7; Gaz. vol. 232; p. 174.
Water-closet apparatus, Valve construction for. A. F. Gabell. No. 1,203,724; Nov. 7; Gaz. vol. 232; p. 60.
Water-distributing system. G. M. Hubbell. No. 1,204,156; Nov. 7; Gaz. vol. 232; p. 211.
Water-elevator. J. M. Stafford. No. 1,203,926; Nov. 7; Gaz. vol. 232; p. 132.
Water-gage for steam-boilers and similar apparatus. E. A. Kelsey. No. 1,204,034; Nov. 7; Gaz. vol. 232; p. 169.
Water-heater, Automatic. T. J. Radke. No. 1,204,313; Nov. 7; Gaz. vol. 232; p. 264.
Water-heating and sprinkler system, Combined. W. K. Hodgman. No. 1,203,738; Nov. 7; Gaz. vol. 232; p. 65.
Watering device for cattle. H. C. Rassmann. No. 1,204,066; Nov. 7; Gaz. vol. 232; p. 181.
Waterproofing composition. O. E. Gelertsen. No. 1,204,149; Nov. 7; Gaz. vol. 232; p. 209.
Waterproofing composition, Non-inflammable. J. O. Persons. No. 1,204,056; Nov. 7; Gaz. vol. 232; p. 177.
Wave and wind power generator. A. Leppert. No. 1,204,366; Nov. 7; Gaz. vol. 232; p. 282.
Wave-motor. C. H. Tolley. No. 1,204,088; Nov. 7; Gaz. vol. 232; p. 189.
Weather-strip. W. Layton. No. 1,204,285; Nov. 7; Gaz. vol. 232; p. 255.
Weighing device. C. C. Clark. No. 1,203,583; Nov. 7; Gaz. vol. 232; p. 10.
Well-drilling device. G. R. Watson. No. 1,204,099; Nov. 7; Gaz. vol. 232; p. 192.
Wells, Sand-trap for oil-. C. A. Wiley. No. 1,204,105; Nov. 7; Gaz. vol. 232; p. 194.
Wheel: *See*—
Car-wheel. Spring-wheel.
Fly-wheel. Vehicle-wheel.
Resilient wheel.
Wind instruments, Attachment for. W. M. Phillips. No. 1,204,060; Nov. 7; Gaz. vol. 232; p. 179.
Wind-shield for vehicles, Inside. G. V. Cring. No. 1,203,587; Nov. 7; Gaz. vol. 232; p. 12.
Wind-shield protector. I. C. Bowman. No. 1,204,122; Nov. 7; Gaz. vol. 232; p. 201.
Winding-machine. C. Ryden. No. 1,203,790; Nov. 7; Gaz. vol. 232; p. 83.
Window-cleaner. J. R. Ayotte. No. 1,203,684; Nov. 7; Gaz. vol. 232; p. 47.

Window-lock. J. E. Callow and D. Kroes. No. 1,203,974; Nov. 7; Gaz. vol. 232; p. 148.
Window-lock. J. S. Curnow. No. 1,203,986; Nov. 7; Gaz. vol. 232; p. 152.
Window-lock. H. George. No. 1,203,606; Nov. 7; Gaz. vol. 232; p. 18.
Window-locking device, Automatic. M. G. Bunnell. No. 1,203,971; Nov. 7; Gaz. vol. 232; p. 147.
Window-screen. G. W. Bailey. No. 1,204,116; Nov. 7; Gaz. vol. 232; p. 198.
Window-screen. C. A. Bates and W. W. Hobby. No. 1,204,235; Nov. 7; Gaz. vol. 232; p. 239.
Window-screen. H. A. Eldredge. No. 1,204,140; Nov. 7; Gaz. vol. 232; p. 206.
Window-screen. B. F. Laudenschlager and J. S. Frederick. No. 1,203,634; Nov. 7; Gaz. vol. 232; p. 28.
Window-ventilator. I. B. Ingle. No. 1,204,158; Nov. 7; Gaz. vol. 232; p. 211.
Windows, Means for raising and lowering vehicle and other. A. Speight. No. 1,204,201; Nov. 7; Gaz. vol. 232; p. 227.
Wire-connector. O. Bajma-Riva. No. 1,203,565; Nov. 7; Gaz. vol. 232; p. 4.
Wire-holding stand. J. W. Peter. No. 1,204,308; Nov. 7; Gaz. vol. 232; p. 263.
Wire-stretcher. L. Kasprzyk. No. 1,204,277; Nov. 7; Gaz. vol. 232; p. 252.
Wire-stretcher. E. B. Lindsey. No. 1,204,168; Nov. 7; Gaz. vol. 232; p. 216.
Wire-stretcher. W. Schmoeger. No. 1,204,076; Nov. 7; Gaz. vol. 232; p. 185.
Wire-stretching means. T. L. Hargis. No. 1,203,617; Nov. 7; Gaz. vol. 232; p. 23.
Wood, Process and product of treating. H. W. Broady. No. 1,203,577; Nov. 7; Gaz. vol. 232; p. 8.
Wrapping hose and similar articles, Machine for. H. Z. Cobb. No. 1,204,342; Nov. 7; Gaz. vol. 232; p. 274.
Wrapping-machine. H. De Escobales. No. 1,203,592; Nov. 7; Gaz. vol. 232; p. 14.
Wrench: *See*—
Adjustable set-wrench. Ratchet-wrench.
Wrench. L. A. Carner. No. 1,204,129; Nov. 7; Gaz. vol. 232; p. 202.
Wrench. H. V. Haines. No 1,203,728; Nov. 7; Gaz. vol. 232; p. 61.
Wrench. I. A. Larson. No. 1,203,750; Nov. 7; Gaz. vol. 232; p. 70.
Wrench. W. H. Spanier. No. 1,204,383; Nov. 7; Gaz. vol. 232; p. 288.
Yoke, Draft-. I. O. Wright. No. 1,203,834; Nov. 7; Gaz. vol. 232; p. 99.

DESIGNS.

Automobile-body. C. B. Mueller. No. 49,851; Nov. 7; Gaz. vol. 232; p. 294.
Badge or insignia. W. H. Sickels. No. 49,865; Nov. 7; Gaz. vol. 232; p. 296.
Bowl-hanger and outside-light support. B. Schwartzman. No. 49,859; Nov. 7; Gaz. vol. 232; p. 295.
Button. J. T. Monaghan. Nos. 49,848–50; Nov. 7; Gaz. vol. 232; pp. 293–4.
Button. R. Siebert. Nos. 49,866–7; Nov. 7; Gaz. vol. 232; p. 297.
Fabric, Netted. W. W. Chace. No. 49,842; Nov. 7; Gaz. vol. 232; p. 292.
Fabric, Printed. H. Wearne. Nos. 49,869–73; Nov. 7; Gaz. vol. 232; pp. 297–8.
Flower-stands, Tube-receiving pedestal for. H. Northwood. No. 49,852; Nov. 7; Gaz. vol. 232; p. 294.
Game apparatus. A. P. Chase. No. 49,843; Nov. 7; Gaz. vol. 232; p. 292.
Inkstand. J. T. Riley. Nos. 49,853–7; Nov. 7; Gaz. vol. 232; pp. 294–5.
Lighting-fixture arm. B. Schwartzman. No. 49,858; Nov. 7; Gaz. vol. 232; p. 295.
Lighting-fixture arm. B. Schwartzman. No. 49,862; Nov. 7; Gaz. vol. 232; p. 296.
Lighting-fixture bowl-hanger. B. Schwartzman. No. 49,861; Nov. 7; Gaz. vol. 232; p. 296.
Lighting-fixture ornament. B. Schwartzman. No. 49,860; Nov. 7; Gaz. vol. 232; p. 296.
Liquid-server or similar article. H. P. Jenks. No. 49,845; Nov. 7; Gaz. vol. 232; p. 293.
Picture-frame. L. Klein. No. 49,846; Nov. 7; Gaz. vol. 232; p. 293.
Plate or similar article. W. Abrams. No. 49,841; Nov. 7; Gaz. vol. 232; p. 292.
Puzzle-box. W. J. McKoy. No. 49,847; Nov. 7; Gaz. vol. 232; p. 293.
Spoons, forks, or similar articles, Handle for. B. P. Jenks. No. 49,844; Nov. 7; Gaz. vol. 232; p. 292.
Spoons, forks, or similar articles, Handle for. A. H. Staf. No. 49,868; Nov. 7; Gaz. vol. 232; p. 297.
Tongs. C. W. Seaman. No. 49,863; Nov. 7; Gaz. vol. 232; p. 296.
Vacuum-cleaner case. I. L. Sheffler. No. 49,864; Nov. 7; Gaz. val. 232; p. 296.

TRADE-MARKS.

Apparel and furnishings, Wearing-. Robert Reis & Co. No. 113,910; Nov. 7; Gaz. vol. 232; p. 316.
Balances and scales. Landers, Frary & Clark. No. 113,889; Nov. 7; Gaz. vol. 232; p. 316.
Barrels and casks, Gum headings for. Himmelberger-Harrison Lumber Co. No. 113,881; Nov. 7; Gaz. vol. 232; p. 316.
Beer. North American Brewing Company. No. 113,900; Nov. 7; Gaz. vol. 232; p. 316.
Beverage and syrups for making same, Carbonated non-alcoholic. Orange Crush Co. No. 113,902; Nov. 7; Gaz. vol. 232; p. 316.
Beverages and syrups for making same, Grape-flavored. C. J. Donnelly. No. 113,871; Nov. 7; Gaz. vol. 232; p. 315.
Beverages made of malt, hops, &c. The Pilsener Brewing Company. No. 113,908; Nov. 7; Gaz. vol. 232; p. 316.
Boots and shoes, Leather. The Commonwealth Shoe and Leather Company. No. 113,867; Nov. 7; Gaz. vol. 232; p. 315.
Brace, Body-. The Abformator Support Co. No. 113,851; Nov. 7; Gaz. vol. 232; p. 315.
Butter, cheese, cream, milk, &c. California Central Creameries. No. 113,861; Nov. 7; Gaz. vol. 232; p. 315.
Carbureters and parts thereof for internal-combustion engines. The Aston Motor Accessories Co. No. 113,856; Nov. 7; Gaz. vol. 232; p. 315.
Catalogues, price-lists, &c. James B. Clow & Sons. No. 113,866; Nov. 7; Gaz. vol. 232; p. 315.
Cheese. Gerber & Co. No. 113,880; Nov. 7; Gaz. vol. 232; p. 316.
Cement, Portland. Cape Girardeau Portland Cement Co. No. 113,863; Nov. 7; Gaz. vol. 232; p. 315.
Cement-surface hardener, Liquid preparation for use as a. Patton Paint Company. No. 113,906; Nov. 7; Gaz. vol. 232; p. 316.
Coffee, Roasted. Tillmann & Bendel. No. 113,924; Nov. 7; Gaz. vol. 232; p. 317.
Collars, harness, and riding-saddles, Horse-. Scheffer & Rossum Company. No. 113,916; Nov. 7; Gaz. vol. 232; p. 317.
Containers for creams, ice-creams, liquid foods, &c., Edible. American Ingenuities Corporation. No. 113,854; Nov. 7; Gaz. vol. 232; p. 315.
Cream, Face-. L. Burd. No. 113,860; Nov. 7; Gaz. vol. 232; p. 315.
Cream to soften and whiten the skin, Massage-. Matthews & Lively Co. No. 113,894; Nov. 7; Gaz. vol. 232; p. 316.
Creams, Toilet. R. A. Sweet. No. 113,923; Nov. 7; Gaz. vol. 232; p. 317.
Cutlery and tools, Certain named. Darwin & Milner. No. 113,869; Nov. 7; Gaz. vol. 232; p. 315.
Diapers. Lehigh Paper Mills. No. 113,891; Nov. 7; Gaz vol. 232; p. 316.
Ditchers and graders. Owensboro Ditcher & Grader Co. No. 113,903; Nov. 7; Gaz. vol. 232; p. 316.
Eggs during incubation, Strengthening application for. Geo. H. Lee Company. No. 113,890; Nov. 7; Gaz. vol. 231; p. 316.
Electric illuminating apparatus, Certain named. National X-Ray Reflector Company. No. 113,897; Nov. 7; Gaz. vol. 232; p. 316.
Embroidery work, Fancy materials for hand-. Campbell, Metzger & Jacobson. No. 113,862; Nov. 7; Gaz. vol. 232; p. 315.
Furniture, Certain named. C. J. Wadsworth. No. 113,928; Nov. 7; Gaz. vol. 232; p. 317.
Furniture, Certain named. Willowcraft Shops. No. 113,929; Nov. 7; Gaz. vol. 232; p. 317.
Furniture, Dining-room. The Newark Ohio Furniture Co. No. 113,899; Nov. 7; Gaz. vol. 232; p. 316.
Furniture-polish. City Music Company. No. 113,865; Nov. 7; Gaz. vol. 232; p. 315.
Gloves, Base-ball. A. J. Reach Company. No. 113,909; Nov. 7; Gaz. vol. 232; p. 316.

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Hog-cholera. Preparation for treatment of. I. E. Johnson. No. 113,887; Nov. 7; Gaz. vol. 232; p. 316.
Hose, tubing, belting, gaskets, valves, and machinery packing. Imperial Rubber Co. No. 113,886; Nov. 7; Gaz. vol. 232; p. 316.
Knives and scissors, Pocket-. Schmachtenberg Bros. No. 113,918; Nov. 7; Gaz. vol. 232; p. 317.
Knives, Pen and pocket. Schmachtenberg Bros. No. 113,917; Nov. 7; Gaz. vol. 232; p. 317.
Liniment. J. S. Bishop. No. 113,857; Nov. 7; Gaz. vol. 232; p. 315.
Lotion, Facial. M. A. Robinson. No. 113,911; Nov. 7; Gaz. vol. 231; p. 317.
Lotion or wash, Eye. A. W. Fuhrmann. No. 113,879; Nov. 7; Gaz. vol. 232; p. 316.
Mattresses. Southern Bedding Manufacturing Co. No. 113,920; Nov. 7; Gaz. vol. 232; p. 317.
Medical preparation for treating the tobacco habit. J. H. Holihan. No. 113,883; Nov. 7; Gaz. vol. 232; p. 316.
Medicinal preparation, a tonic and blood-purifier. D. H. Hunt. No. 113,885; Nov. 7; Gaz. vol. 232; p. 316.
Medicinal preparation for diseases of the kidneys and liver and analogous ailments. S. Pfeiffer Manufacturing Company. No. 113,907; Nov. 7; Gaz. vol. 232; p. 316.
Medicinal preparation for rheumatic pains, headaches, and colds. The Edwards Laboratories Company. No. 113,875; Nov. 7; Gaz. vol. 232; p. 315.
Medicinal tablet for stomach ailments. Eatonic Remedy Co. Nos. 113,873–4; Nov. 7; Gaz. vol. 232; p. 315.
Medicinal water, being an antiseptic for the mouth, throat, stomach, &c. The Eman Manufacturing Company. No. 113,877; Nov. 7; Gaz. vol. 232; p. 315.
Medicine for stomach, liver, kidneys, &c. E. M. Co. No. 113,876; Nov. 7; Gaz. vol. 232; p. 315.
Medicine for treatment of the effects of inebriety. H. J. Glick. No. 113,882; Nov. 7; Gaz. vol. 232; p. 316.
Nipples, Nursing-. The Vant Woud Rubber Co. No. 113,926; Nov. 7; Gaz. vol. 232; p. 317.
Oars. De Grauw, Aymar & Company. No. 113,870; Nov. 7; Gaz. vol. 232; p. 315.
Oil, Mulsified and saponified cocoanut-. Empire Chemical Company. No. 113,878; Nov. 7; Gaz. vol. 232; p. 315.
Ointment for the relief of skin eruptions. Alexander Drug Co. No. 113,853; Nov. 7; Gaz. vol. 232; p. 315.
Ointments, tonic and antiseptic solutions for diseases of and injuries to the skin. J. D. Park. No. 113,904; Nov. 7; Gaz. vol. 232; p. 316.
Paint, Ready-mixed. Star Products Co. No. 113,921; Nov. 7; Gaz. vol. 232; p. 317.
Papers, Writing and printing. Parsons Paper Company. No. 113,905; Nov. 7; Gaz. vol. 232; p. 316.
Pharmaceutical preparation for eczematous and allied skin afflictions. Royal Remedies Company. No. 113,913; Nov. 7; Gaz. vol. 232; p. 317.
Pharmaceutical preparations, Certain named. G. A. Kerros. No. 113,888; Nov. 7; Gaz. vol. 232; p. 316.
Pharmaceutical preparations for rheumatism, lumbago, and sciatica. F. F. Dow. No. 113,872; Nov. 7; Gaz. vol. 232; p. 315.
Pharmaceutical preparations for toilet purposes, Certain named. F. T. Hopkins & Son. No. 113,884; Nov. 7; Gaz. vol. 232; p. 316.
Pharmaceutical product. Society of Chemical Industry in Basle. No. 113,919; Nov. 7; Gaz. vol. 232; p. 317.
Pills for biliousness, torpid liver, constipation, &c. J. A. Salter. No. 113,915; Nov. 7; Gaz. vol. 232; p. 317.
Powder-puffs. M. Levy. Nos. 113,892–3; Nov. 7; Gaz. vol. 232; p. 316.
Powder, Toilet. A. Bourjois & Co. No. 113,858; Nov. 7; Gaz. vol. 232; p. 315.
Reflectors for lighting-fixtures, Porcelain. National X-Ray Reflector Company. No. 113,898; Nov. 7; Gaz. vol. 232; p. 316.
Remedies, Eczema. H. M. Swartley. No. 113,922; Nov. 7; Gaz. vol. 232; p. 317.
Remedy, Rheumatism. A. Romano. No. 113,912; Nov. 7; Gaz. vol. 232; p. 317.
Roofing, Sheet-metal. Braden Manufacturing Company. No. 113,859; Nov. 7; Gaz. vol. 232; p. 315.
Silks in the piece, Broad. J. A. Migel. No. 113,895; Nov. 7; Gaz. vol. 232; p. 316.
Slicers, Meat, fruit, and vegetable. Crystal Percolator Co. No. 113,868; Nov. 7; Gaz. vol. 232; p. 315.
Solder known as brazing and spelter solder and brazing-spelter. North American Smelting Co. No. 113,901; Nov. 7; Gaz. vol. 232; p. 316.
Syringes and water-bottles, Seamless fountain-. The Rubber Products Company. No. 113,914; Nov. 7; Gaz. vol. 232; p. 317.
Syrup for soda-water. Celro-Kola Company. No. 113,864; Nov. 7; Gaz. vol. 232; p. 315.
Tonic, Mineral fluid. Vital Remedies Company. No. 113,927; Nov. 7; Gaz. vol. 232; p. 317.
Toy balloons. The Miller Rubber Company. No. 113,896; Nov. 7; Gaz. vol. 232; p. 316.
Vehicle load-indicating mechanisms. F. J. Troll. No. 113,925; Nov. 7; Gaz. vol. 232; p. 317.
Whisky. Womack Bros. No. 113,930; Nov. 7; Gaz. vol. 232; p. 317.
Wood substitutes made from pulp. The Agasote Millboard Co. No. 113,852; Nov. 7; Gaz. vol. 232; p. 315.

LABELS.

"A G." (For Goldwasser.) A. Grunbaum. No. 19,724; Nov. 7; Gaz. vol. 232; p. 318.
"Annette Kellermann Chill-Off Beach Cape." (For Bathing-Capes.) L. C. Asch. No. 19,719; Nov. 7; Gaz. vol. 232; p. 318.
"Beech-Nut Brand Chewing Gum." (For Chewing-Gum.) Beech-Nut Packing Company. Nos. 19,722–3; Nov. 7; Gaz. vol. 232; p. 318.
"Beech-Nut Brand Mints." (For Candies and Confections.) Beech-Nut Packing Company. No. 19,720; Nov. 7; Gaz. vol. 232; p. 318.
"Beech-Nut Brand Wintergreens." (For Wintergreen-Flavored Candies and Confections.) Beech-Nut Packing Company. No. 19,721; Nov. 7; Gaz. vol. 232; p. 318.
"Coffee." (For Coffee.) B. Fischer & Co. No. 19,725; Nov. 7; Gaz. vol. 232; p. 318.
"Dolora." (For Cigars.) C. B. Herschel Mfg. Co. No. 19,729; Nov. 7; Gaz. vol. 232; p. 318.
"88 Special." (For Whisky.) Josselson Bros. No. 19,730; Nov. 7; Gaz. vol. 232; p. 318.
"Excellent Hair Grower." (For a Hair-Grower.) B. Greene. No. 19,726; Nov. 7; Gaz. vol. 232; p. 318.
"Gasald." (For a Substance to be Mixed with Gasolene.) The Pitchford Chemical Laboratories. No. 19,733; Nov. 7; Gaz. vol. 232; p. 318.
"Great Big Baked Potato." (For Packages of Candy.) Koenig Candy Company. No. 19,731; Nov. 7; Gaz. vol. 232; p. 318.
"McQuay-Norris Leak-Proof Piston Rings." (For Piston-Rings.) McQuay-Norris Mfg. Co. No. 19,732; Nov. 7; Gaz. vol. 232; p. 318.
"Tafimalts." (For Candy.) Geo. Haas & Sons. No. 19,727; Nov. 7; Gaz. vol. 232; p. 318.
"The Wonder Corn Shields." (For Corn-Shields.) P. Wetzel. No. 19,734; Nov. 7; Gaz. vol. 232; p. 318.
"Turkey Red." (For Hard-Wheat Flour.) Hannah & Lay Company. No. 19,728; Nov. 7; Gaz. vol. 232; p. 318.
"Uncle Sam." (For Union-Suits.) The Argyle Co. No. 19,718; Nov. 7; Gaz. vol. 232; p. 318.

PRINTS.

"Ah've always said and now repeat—Ma health am due to Cream O' Wheat!" (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,547; Nov. 7; Gaz. vol. 232; p. 318.
"Gold Nuggets." (For Popcorn Confections.) J. H. Smith. No. 4,551; Nov. 7; Gaz. vol. 232; p. 318.
"Gordon Convertible Winter and Summer Top, Gordon Seat Coverings, Gordon Tire Covers, Gordon Radiator and Engine Robe." (For Gordon Convertible Winter and Summer Tops, Gordon Seat-Coverings, Gordon Tire-Covers, and Gordon Radiator and Engine Robes.) The J. P. Gordon Company. No. 4,548; Nov. 7; Gaz. vol. 232; p. 318.
"Have You Had Your Morning Sip?" (For Coffee.) Alexander Sheppard & Sons. No. 4,550; Nov. 7; Gaz. vol. 232; p. 318.
"It Makes a Difference." (For Oil.) Indian Refining Company. No. 4,549; Nov. 7; Gaz. vol. 232; p. 318.
"Make delicious ice cream and frozen dainties with Carnation Milk." (For Milk.) Carnation Milk Products Company. No. 4,546; Nov. 7; Gaz. vol. 232; p. 318.

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Ampuls. Kalo-Kain Chemical Company. No. 98,294; Nov. 7; Gaz. vol. 232; p. 313.
Automobile-trailers. Auto-Kamp Equipment Co. No. 98,152; Nov. 7; Gaz. vol. 232; p. 312.
Bacon and hams. Armour and Company. No. 96,944; Nov. 7; Gaz. vol. 232; p. 305.
Bags. Chase Bag Co. No. 97,894; Nov. 7; Gaz. vol. 232; p. 309.
Balls for ball and tube mills. Los Angeles Foundry Company. No. 97,799; Nov. 7; Gaz. vol. 232; p. 308.
Bearings and bushings. General Aluminum & Brass Manufacturing Company. No. 97,639; Nov. 7; Gaz. vol. 232; p. 308.
Beds, mattresses, bed-springs. M. Lipps. No. 89,548; Nov. 7; Gaz. vol. 232; p. 300.
Bedspreads. Cotton. Italian Bed Spread Co. No. 98,518; Nov. 7; Gaz. vol. 232; p. 313.
Beverage to be sold as a soft drink, Non-alcoholic. E. S. Eby. No. 98,162; Nov. 7; Gaz. vol. 232; p. 312.
Beverages put up in bottles, kegs, and barrels, Non-alcoholic. C. F. P. Korssell. No. 98,212; Nov. 7; Gaz. vol. 232; p. 312.
Boots and shoes, Leather. F. M. Hoyt Shoe Company. No. 98,166; Nov. 7; Gaz. vol. 232; p. 312.
Boots and shoes, Leather, rubber, felt, &c. Geo. E. Keith Company. No. 88,742; Nov. 7; Gaz. vol. 232; p. 290.
Boots, shoes, and slippers, Women's, misses', and children's. Faunce and Spinney. No. 98,206; Nov. 7; Gaz. vol. 232; p. 312.
Bottles, Nursing-. Infants Specialty Company. No. 97,907; Nov. 7; Gaz. vol. 232; p. 309.
Brooms. Lee Broom & Duster Company. Nos. 97,218–20; Nov. 7; Gaz. vol. 232; pp. 305–6.
Candy. United Drug Company. No. 98,199; Nov. 7; Gaz. vol. 232; p. 312.
Canned foods, preserves, catsup, food-flavoring extracts. Brodsky Palman Gelber Co. No. 97,492; Nov. 7; Gaz. vol. 232; p. 307.
Canned salmon. Columbia River Packers Association. Nos. 98,022–4; Nov. 7; Gaz. vol. 232; pp. 310–11.
Chemicals and pigments for general use. C. F. Gledhill. No. 92,975; Nov. 7; Gaz. vol. 232; p. 301.
Chocolates and candy goods. American Candy Co. No. 97,967; Nov. 7; Gaz. vol. 232; p. 310.
Cigars. Otto Eisenlohr & Bro. No. 97,964; Nov. 7; Gaz. vol. 232; p. 309.
Cigars. United Cigar Manufacturers Company. No. 97,484; Nov. 7; Gaz. vol. 232; p. 307.
Cigars. United Cigar Manufacturers Company. No. 97,488; Nov. 7; Gaz. vol. 232; p. 307.
Coal. Roman & Bush Pig Iron & Coke Co. No. 97,929; Nov. 7; Gaz. vol. 232; p. 309.
Coal and coke. Stonega Coke & Coal Co. No. 96,909; Nov. 7; Gaz. vol. 232; p. 305.
Coffee. Foley Bros. & Quinlan. No. 95,964; Nov. 7; Gaz. vol. 232; p. 303.
Coffee. Schnull & Co. No. 91,333; Nov. 7; Gaz. vol. 232; p. 300.
Cotton piece goods. J. A. Finn & Company. No. 97,623; Nov. 7; Gaz. vol. 232; p. 307.
Cotton piece goods, nainsooks, and long-cloths. R. H. Macy & Co. No. 98,116; Nov. 7; Gaz. vol. 232; p. 311.
Cupolas, ventilators, window frames and sashes, &c., Metal. Shrauger & Johnson. No. 96,416; Nov. 7; Gaz. vol. 232; p. 304.
Dental powder for assisting in holding dental plates in the mouth. Corega Chemical Company. No. 80,781; Nov. 7; Gaz. vol. 232; p. 290.
Drink, Solt. Quaker-Kola Company. No. 98,271; Nov. 7; Gaz. vol. 232; p. 313.
Eyeglasses, lenses, goggles, &c. F. A. Hardy & Company. No. 95,548; Nov. 7; Gaz. vol. 232; p. 303.
Feed, Dairy. Tioga Mill & Elevator Co. No. 98,106; Nov. 7; Gaz. vol. 232; p. 311.
Feed, Poultry. [illegible]nadian Mill & Elevator Co. No. 97,207; Nov. 7; Gaz. vol. 232; p. 305.
Fertilizers. American Agricultural Chemical Company. No. 97,888; Nov. 7; Gaz. vol. 232; p. 309.
Fertilizers. Berg Company. No. 97,431; Nov. 7; Gaz. vol. 232; p. 306.
Fire-extinguishers, Chemical. Bargar Mfg. Co. No. 98,132; Nov. 7; Gaz. vol. 232; p. 312.
Flavoring extracts for foods, and spices. D. & L. Slade Company. No. 97,284; Nov. 7; Gaz. vol. 232; p. 306.
Flour, Wheat-. B. A. Eckhart Milling Co. No. 97,900; Nov. 7; Gaz. vol. 232; p. 309.
Flour, Wheat-. Kirkland Distributing Company. No. 97,578; Nov. 7; Gaz. vol. 232; p. 307.
Flour, Wheat-. W. M. Atkinson. No. 97,778; Nov. 7; Gaz. vol. 232; p. 308.
Food-containers. Vacuum Can Co. No. 97,101; Nov. 7; Gaz. vol. 232; p. 305.
Foods, Prepared stock and poultry. Darling & Company. No. 92,465; Nov. 7; Gaz. vol. 232; p. 301.
Fruits, Citrus. S. C. Bass. No. 91,285; Nov. 7; Gaz. vol. 232; p. 300.
Furniture, piano, and automobile polish and varnish renewer. J. P. Barron. No. 95,743; Nov. 7; Gaz. vol. 232; p. 303.
Gages and micrometers. Greenfield Tap and Die Corporation. No. 93,792; Nov. 7; Gaz. vol. 232; p. 302.
Gas and combination lighting-fixtures and parts for same. B. F. Klein. No. 90,514; Nov. 7; Gaz. vol. 232; p. 300.
Gasolene, benzin, naphtha-kerosene, motor-spirit, &c. Petroleum Products Co. of California. No. 93,469; Nov. 7; Gaz. vol. 232; p. 301.
Gasolene-improver or preparation for augmenting the energy of motor-fuels. J. R. Landauer. No. 86,087; Nov. 7; Gaz. vol. 232; p. 290.
Grape-juice and apple nectar. Austin, Nichols & Co. No. 98,070; Nov. 7; Gaz. vol. 232; p. 311.
Gum, Chewing-. J. B. Robbins. No. 97,096; Nov. 7; Gaz. vol. 232; p. 305.
Hair-nets. J. S. Bender Co. No. 96,885; Nov. 7; Gaz. vol. 232; p. 304.
Hair, Preparation or dressing for. C. J. Haller. No. 94,706; Nov. 7; Gaz. vol. 232; p. 302.
Hair-tonic, shampoo preparations, cold-cream, powder, and rouge. O. L. Prather. No. 95,979; Nov. 7; Gaz. vol. 232; p. 303.
Heels, heel-lifts, and soles, Composition. Fiberite Heel and Leather Co. No. 97,624; Nov. 7; Gaz. vol. 232; p. 308.
Hog and pig rings. W. E. Pratt. No. 91,081; Nov. 7; Gaz. vol. 232; p. 300.
Hosiery. Rice-Stix Dry Goods Company. No. 91,402; Nov. 7; Gaz. vol. 232; p. 300.
Hot-water bottles and fountain-syringes. Peninsular Chemical Company. No. 97,978; Nov. 7; Gaz. vol. 232; p. 310.
Insulated wire. Atlantic Insulated Wire & Cable Company. No. 93,733; Nov. 7; Gaz. vol. 232; p. 301.
Knitted underwear in one and two piece garments. Lax & Burgheimer. No. 96,716; Nov. 7; Gaz. vol. 232; p. 304.
Laces and cotton goods in the piece. M. Smolowitz. No. 95,180; Nov. 7; Gaz. vol. 232; p. 302.
Laxatives. R. Mertin. No. 97,956; Nov. 7; Gaz. vol. 232; p. 309.
Macaroni, cheese, and olive-oil emulsion. Pompeian Co. No. 94,581; Nov. 7; Gaz. vol. 232; p. 302.
Margarin. F. F. Jelke. No. 97,839; Nov. 7; Gaz. vol. 232; p. 308.
Medicinal chemical for the treatment of rheumatism. Röhm & Haas. No. 95,426; Nov. 7; Gaz. vol. 232; p. 302.
Newspaper-section. Newspaper Feature Service. No. 96,877; Nov. 7; Gaz. vol. 232; p. 304.
Oakum for packing and calking. American Manufacturing Company. No. 95,840; Nov. 7; Gaz. vol. 232; p. 303.
Oil emulsion, Olive-. Pompeian Co. No. 94,582; Nov. 7; Gaz. vol. 232; p. 302.
Oil for screw-cutting and all other lubricating purposes, Cotton-seed. American Cotton Oil Company. No. 98,200; Nov. 7; Gaz. vol. 232; p. 312.
Oils and greases, Illuminating and lubricating. Galena-Signal Oil Company. No. 97,972; Nov. 7; Gaz. vol. 232; p. 310.
Oyster-display cases. American Can Co. No. 88,797; Nov. 7; Gaz. vol. 232; p. 290.
Paint, varnish, whitewash, calcimine, and brushes. Rennous, Kleinle & Company. No. 98,061; Nov. 7; Gaz. vol. 232; p. 311.
Paint, varnish, whitewash, calcimine, and brushes. Rennous, Kleinle & Company. No. 98,063; Nov. 7; Gaz. vol. 232; p. 311.
Paints, Ready-mixed and solid-block. Walles Dove Bitumastic Limited. No. 96,575; Nov. 7; Gaz. vol. 232; p. 304.
Paints, wood and varnish stains, &c., Paste and liquid. A. Burdsal Co. No. 96,776; Nov. 7; Gaz. vol. 232; p. 304.
Paper, Bond and ledger. Neenah Paper Company. No. 97,924; Nov. 7; Gaz. vol. 232; p. 309.
Paper, envelops, tablets, writing-cards, cardboard, Writing and printing. Eaton, Crane & Pike Company. No. 98,006; Nov. 7; Gaz. vol. 232; p. 310.
Pencil-sharpeners, writing and drawing paper, envelops, &c. Geo. Borgfeldt & Co. No. 92,798; Nov. 7; Gaz. vol. 232; p. 301.
Petticoats, union-suits, corset-covers, &c. E. B. Amsden. No. 97,831; Nov. 7; Gaz. vol. 232; p. 308.
Plushes in the piece. Sidney Blumenthal & Company. No. 98,129; Nov. 7; Gaz. vol. 232; p. 311.
Powder, cold-cream, hair-wash, &c., Face.- Armand Company. No. 97,570; Nov. 7; Gaz. vol. 232; p. 307.
Preparation for curing corns. S. K. Salleby. No. 98,393; Nov. 7; Gaz. vol. 232; p. 313.
Preparation to be applied to coal to render the combustion more complete. Lloyds of America. No. 97,953; Nov. 7; Gaz. vol. 232; p. 309.

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Punching-machines for perforating sheets. Samuel C. Tatum Co. No. 98,251; Nov. 7; Gaz. vol. 232; p. 313.
Razor-strops. L. A. Flinker. No. 96,954; Nov. 7; Gaz. vol. 232; p. 305.
Remedy and hair-restorer, Dandruff. S. Levy. No. 97,997; Nov. 7; Gaz. vol. 232; p. 310.
Remedy for indigestion, constipation, heartburn, &c. S. B. Goff & Sons Co. No. 97,302; Nov. 7; Gaz. vol. 232; p. 306.
Remedy for intestinal stasis and constipation. F. H. Glazebrook. No. 97,683; Nov. 7; Gaz. vol. 232; p. 308.
Remedy for neuralgia and rheumatism in all forms. Smith-Dorsey Company. No. 96,738; Nov. 7; Gaz. vol. 232; p. 304.
Salve for catarrh, sore throat, tonsillitis, and croup. J. S. McClanahan. No. 94,504; Nov. 7; Gaz. vol. 232; p. 302.
Shirts, Negligée, work, and under. Elder Manufacturing Company. No. 97,622; Nov. 7; Gaz. vol. 232; p. 307.
Shirts, undershirts, overalls, jumpers, rompers, Work and negligée. Edson, Moore & Company. No. 97,407; Nov. 7; Gaz. vol. 232; p. 306.
Shoes, hosiery, underwear, aprons, blouses, &c. Hess Brothers. No. 89,461; Nov. 7; Gaz. vol. 232; p. 290.
Shoes, Leather. Samuels Shoe Company. No. 97,002; Nov. 7; Gaz. vol. 232; p. 305.
Silk, Crape. L. Roessel & Co. No. 98,099; Nov. 7; Gaz. vol. 232; p. 311.
Shirts, suits, coats, Ladies'. Bernstein, Baum, Cravis & Company. No. 92,431; Nov. 7; Gaz. vol. 232; p. 300.
Stone, Enamel-coated natural. Euclid Stone & Brick Co. No. 98,322; Nov. 7; Gaz. vol. 232; p. 313.
Talking-machines. Baltimore Bargain House. No. 98,110; Nov. 7; Gaz. vol. 232; p. 311.
Telegraph keys and sounders, lightning-arresters, electric relays, cut-outs, &c. Manhattan Electrical Supply Company. No. 97,733; Nov. 7; Gaz. vol. 232; p. 308.
Terne plates. Lyon, Conklin & Co. No. 98,387; Nov. 7; Gaz. vol. 232; p. 313.
Tires or tire-casings and inner tubes for pneumatic tires. General Tire and Rubber Company. No. 94,741; Nov. 7; Gaz. vol. 232; p. 302.
Tobacco, Smoking-. Texas Tobacco Co. No. 98,036; Nov. 7; Gaz. vol. 232; p. 311.
Toilet preparations. J. C. Allen. No. 94,270; Nov. 7; Goz. vol. 232; p. 302.
Tonic and nerve-sedative. S. Britton. No. 98,005; Nov. 7; Gaz. vol. 232; p. 310.
Tonic, Liver-. Traveler Remedy Co. No. 98,497; Nov. 7; Gaz. vol. 232; p. 300.
Tonic, Stomach-. D. Perrucci. No. 96,905; Nov. 7; Gaz. vol. 232; p. 304.
Trunks. Frederick & Nelson. No. 98,241; Nov. 7; Gaz. vol. 232; p. 313.
Twines and ropes made from shredded fibers of palmetto or palm leaves. Palmetto Products Company. No. 95,683; Nov. 7; Gaz. vol. 232; p. 303.
Twines and ropes made from shredded palmetto or palm leaves. Palmetto Products Company. No. 95,684; Nov. 7; Gaz. vol. 232; p. 303.
Union-suits, undershirts, drawers, and pajamas, Textile. P. A. Luckett. No. 93,801; Nov. 7; Gaz. vol. 232; p. 302.
Vegetables, fruits, malts, coffees, teas, &c. Air Utilities Company. No. 93,290; Nov. 7; Gaz. vol. 232; p. 301.
Waists, undergarments, and hosiery. Oppenheim, Collins, & Company, New York. No. 96,933; Nov. 7; Gaz. vol. 232; p. 305.
Water and soft drinks, Natural and carbonated mineral. Bartlett Springs Co. No. 97,386; Nov. 7; Gaz. vol. 232; p. 306.
Water, Mineral. Johnson Bros. No. 97,975; Nov. 7; Gaz. vol. 232; p. 310.
Waterproofed fabric. Tate Electrolytic Waterproofing Company. No. 97,244; Nov. 7; Gaz. vol. 232; p. 306.
Waterproofed threads and yarns. Electrolytic Waterproofing Company. No. 97,245; Nov. 7; Gaz. vol 232; p. 306.
Wheels, Grinding-. Star Corundum Wheel Co. No. 98,503; Nov. 7; Gaz. vol. 232; p. 313.
Woolen fabrics, Woven. North Star Woolen Mill Co. No. 98,443; Nov. 7; Gaz. vol. 232; p. 313.

CLASSIFICATION OF PATENTS

ISSUED NOVEMBER 7, 1916.

NOTE.—First number=class, second number=subclass, third number=patent number.

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108: 1,203,672
118: 1,203,870
145: 1,204,054
146: 1,203,561
149: 1,203,785
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193: 1,203,564
4— 1: 1,204,033
5: 1,203,602
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22: 1,204,048
26: 1,203,579
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162: 1,203,822
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23: 1,203,902
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15— 2: 1,203,936
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183: 1,203,831
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22— 92: 1,203,619
115: 1,204,166
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192: 1,204,107
23— 1: 1,203,615
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